

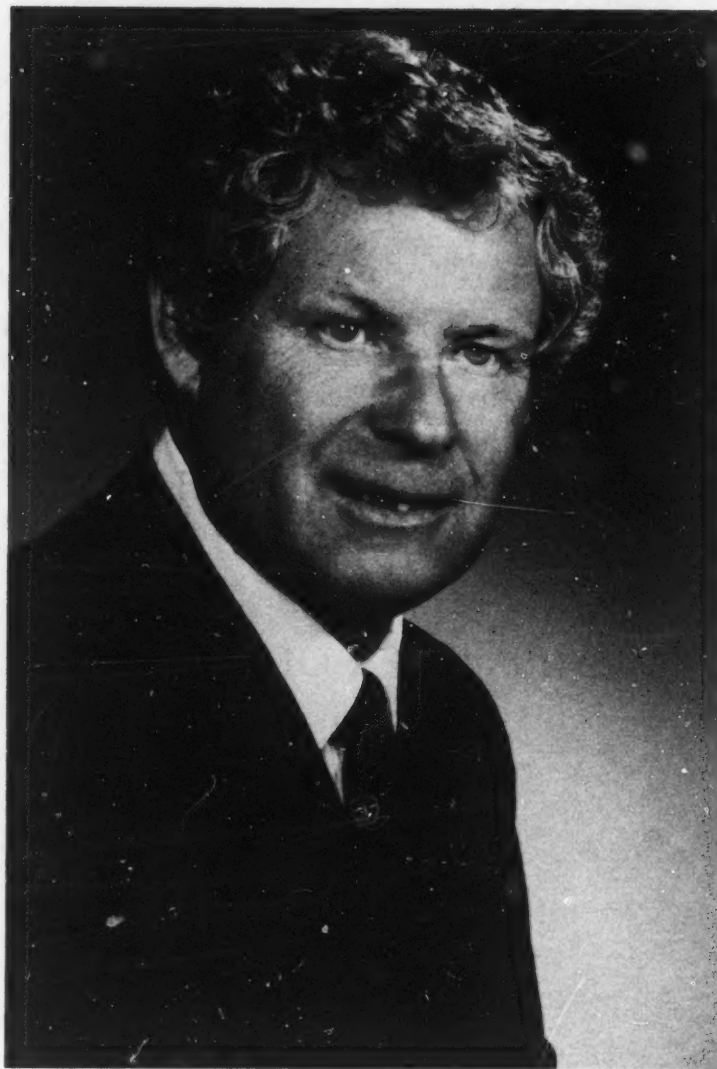
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AGRICULTURE OF VERMONT

**FORTY-FIRST
BIENNIAL REPORT
of the
COMMISSIONER OF AGRICULTURE
of the
STATE OF VERMONT**

1981-1982

GEORGE M. DUNSMORE, COMMISSIONER



RICHARD A. SNELLING, GOVERNOR



GEORGE M. DUNSMORE, COMMISSIONER



STATE OF VERMONT
DEPARTMENT OF AGRICULTURE
116 STATE STREET, STATE OFFICE BUILDING
MONTPELIER, VERMONT 05602

December 15, 1982

The Honorable Richard A. Snelling
Governor
State of Vermont
Montpelier, Vermont 05602

Dear Governor Snelling:

It is my pleasure to submit to you the Vermont Department of Agriculture's Forty-First Biennial Report. This report represents agricultural activities of this department as well as its associated activities with private sector organizations for the period of July 1, 1980 through June 30, 1982.

Sincerely,

A handwritten signature in cursive script that reads "George M. Dunsmore". The signature is written in dark ink and is positioned above the printed name and title.

George M. Dunsmore
Commissioner of Agriculture

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Commissioner's Report

Agriculture is a very dynamic and complex industry. The past two years have been a time of challenge, excitement, and rewarding experiences for me as Vermont Commissioner of Agriculture.

The department has been very involved in a multitude of activities spanning both the dairy and diversified segments of our industry. We have maintained a high quality regulatory program and initiated several new efforts under our Agricultural Development charge.

Dairying continues to be the dominant force within the entire agricultural industry. It has experienced a multitude of pressures which have created change. Major new ventures have developed with the formation of Agri-Mark, the continued success of Express Foods, and the pending completion of the Wyeth Nutritional plant in northwestern Vermont. All of these "bright spots" will be accompanied by continued change and progress in the months ahead as the industry responds to lower product receipts and escalating production input cost. Commercial dairy farm size has grown gradually as total farm numbers decline. A similar effect is being felt in the milk processing area as well. Many farmers encountered negative pressure as certain processors either suffered bankruptcy or were forced to deal with farmers in new and different ways.

As the above-mentioned activities were being experienced, farmers persuaded the legislative body to support a promotional assessment on all dairy farmers. This fund, now functional, is amounting to a sum of money in excess of \$1.6 million annually and is assisting the dairy farmer in maintaining a strong foothold in the marketplace.

It has become very clear to me that Vermont is recognized as a quality source for dairy products, and we must constantly work hard to maintain that standard of excellence. The farmer who survives the decade of the eighties will have recognized this fact. Willingness to

change has been and will continue to be a key in the dairy industry.

In the diversified area many successful initiatives have been taken. These efforts have ranged from a one-on-one relationship with selected growers in the lower Connecticut Valley securing better market situations for them to broad promotional programs with numerous commodity organizations. Commodity promotion boards have been established and are currently operating high quality programs. Others are in the formative stages and should be functional by mid-1983.

All department programs, regulatory and non-regulatory alike, are being formulated on the basis of quality. A Seal of Quality Program was developed and is operational. This program offers both consumer and producer marketplace advantages. Acceptance of the program has been very positive.

The Governor's Agricultural Advisory Board has continued to meet periodically. This board serves as an excellent sounding board for the commissioner and offers an opportunity for private sector influence on operational programs.

The memorandums signed with the Farmers Home Administration and the University of Vermont continue to serve as cornerstones to improved communications and program coordination.

The Governor's Agricultural Policy Statement has served well as a broad backdrop to our program efforts. This document will be reviewed and revised during the next biennium.

In this preface I have only touched on our programs. I have been fortunate to be blessed with a highly professional, dedicated, and skilled staff. Following please find an indepth report revolving around these individuals' accomplishments.

Report of the Vermont Milk Control Board

George M. Dunsmore, *Commissioner of Agriculture, Chairman*
 Dean Rowden, *Member*
 John S. Hall, *Member*
 Donald F. George, *Administrative Officer*
 Eva R. Brown, *Clerk*

After several hearings held by the Vermont Milk Control Board, it was decided to suspend setting minimum producer payment prices to be effective April 1, 1982.

The Milk Control Board has set a hearing for July 1, 1983 to review the effects of the suspension on producer prices and determine if the suspension should be continued.

The Dairy Division of the Department of Agriculture was asked to monitor producer payments during the suspension period. During the first quarter after suspension most Vermont fluid milk processors are paying their producers over and above the Federal 21st Zone Blend price.

Vermont Milk Control Board Statement		
	FY 81	FY 82
Balance Brought Forward	\$19,413.23	\$ 16,755.35
Tax Receipts & Milk Control		
Board License Fees	79,228.18	179,055.45
Balance Available	98,641.41	195,810.80
Administrative Costs		
Board Members &		
Administrative Salaries	1,189.51	1,783.88
Clerical Salaries	4,214.16	4,553.28
Fringe Benefits	694.01	896.70
Consultant Fee (Fred Webster)	....	1,292.57
Legal Advertising	39.59	829.49
Data Processing	116.13	....
Postage	264.02	738.83
Printing/Duplicating	35.00	112.00
Office Supplies	22.07	40.32
Miscellaneous Advertising	3,500.00	....
Board Members &		
Administrative Expenses	238.42	699.94
Total Administrative Costs	10,312.91	10,947.01
Allocations		
State Dairy Council	50,079.23	96,492.00
Milk Promotion Services	19,293.92	59,668.85
June is Dairy Month	2,200.00	....
Dairy Market Development		
Program	....	6,404.00
Green Mountain Dairy Promotion	....	3,000.00
Total Allocations	71,573.15	165,564.85
Escrow Account Pending Litigation	....	2,283.90
Balance Forward	16,755.35	17,015.04

Report of the State Dairy Council

Edward Holden, Bennington, *Chairman*
 Leonard Bull, Burlington, *Secretary*
 James Austin, White River Jct., *Member*
 Douglas Kitchel, Jr., Passumpsic, *Member*
 Austin C. Cleaves, E. Montpelier, *Member*
 Louis E. Maxfield, N. Hartland, *Member*
 Marvin Chapman, North Williston, *Member*
 Edward N. Congdon, North Clarendon, *Member*
 Genevieve Strohmaier, Bennington, *Member*
 Kenneth Bishop, Springfield, *Member*

Ex-Officios

George M. Dunsmore, *Commissioner of Agriculture*
 Chairman of the Department of Animal & Dairy Science, UVM
 Secretary of Agency of Development and Community Affairs

The State Dairy Council administers the milk promotion assessment imposed on all milk sold for consumption within the State of Vermont and the license fees collected by the Milk Control Board.

During the 1980-1981 Session of Legislature Act 101 was passed which provided for a referendum of all Vermont farmers to determine if the assessments imposed on farmers and Vermont fluid milk processors were to be increased. Before the referendum was completed, legal action opposing portions of Act 101 was brought about by eight Vermont dairy farmers. The Vermont Department of Agriculture was successful in securing a stay of the court order which allowed for the counting of the ballots in the referendum. The referendum proved favorable and thus the assessment was increased to producers from 1½¢ per hundredweight to 6/10's of 1% of the producer pay price for the previous calendar year; and increased to handlers from 1½¢ per hundredweight to 18/100's % of the producer price until such time as the Judge could hear arguments from both sides and make a decision.

The final action of the court was to find the referendum portion of Act 101 unconstitutional. In his ruling Judge Amidon did indicate that an assessment which was for the benefit of a group could be imposed by law. For that reason, a revision was presented to the 1981-1982 Session of Legislature which imposed the assessment without an initial referendum. However, it did leave provisions for a referendum which could be brought about by a percentage of those groups being assessed which would determine if the assessment would continue or be discontinued.

Judge Amidon also ruled that the eight original plaintiffs and fifty other producers, who became plaintiff intervenors, were to be reimbursed the amount that was assessed from the time the suit was filed until the revision was passed by Legislature. The amount of money is still being held in escrow pending an agreement of the parties involved or final action by the Supreme Court.

Part of the law changed or revamped the Council's

membership which made the Commissioner of Agriculture, Chairman of the Department of Animal and Dairy Science—UVM, and the Secretary of Agency of Development and Community Affairs ex-officio, and imposed on the Commissioner of Agriculture the responsibility of appointing seven milk producers and two distributors as representatives to allocate the funds.

During the past year the State Dairy Council has met jointly with the Vermont Dairy Industry Council as many of the contracting agencies draw funds from both Councils.

The funds are used for advertising, promotions, research, and administrative costs in the distribution of these functions in the dairy field. The bulk of the funds are allotted to Dairy Council of Vermont with other smaller allocations to the Vermont Milk Flavor Program, Green Mountain Dairy Promotion, Inc., and Milk Promotion Services, Inc.

Report of the Vermont Dairy Industry Council

George M. Dunsmore, *Commissioner of Agriculture, Chairman*

Roderick Towne, *Cabot Farmers Co-op.*

Leo Connor, *Eastern Milk Producers*

Victor Bergevin, *Northern Farms*

Wayne Patenaude, *Agri-Mark, Inc.*

Robert Foster, *Agri-Mark, Inc.*

Dr. Clarence Jordan, *Agri-Mark, Inc.*

Robert Strang, *Richmond Co-op.*

Douglas Nelson, *Independent*

Rodolphe Vallee, *St. Albans Co-op.*

Irving Blackwell, *St. Albans Co-op.*

Herbert Messenger, *Independent Dairymen's Association*

The Vermont Dairy Industry Council administers the milk promotion assessment imposed on milk which is produced in the State of Vermont and sold out of the state.

During the 1980-1981 Session of Legislature revisions to the milk promotion assessment law were passed which affected the Vermont Dairy Industry Council in much the same manner as has been described in the preceding State Dairy Council Report.

Part of the law changed or revamped the Council's membership which did away with the Advisory Council and made it possible for each of the cooperatives to be represented as well as non-member producers or those cooperatives too small to be represented by count.

The funds are used for advertising, promotions, research, and administrative costs in the distribution of these functions in the dairy field. The bulk of the funds are allotted to Milk Promotion Services, Inc., with other smaller allocations to Dairy Council of Vermont, the Vermont Milk Flavor Program, and Green Mountain Dairy Promotion, Inc.

Vermont Dairy Industry Council Statement

	FY 81	FY 82
Balance brought forward	\$ 35,327.28	\$
Receipts received	312,101.14	1,641,161.61
Refunds—court ordered	(4,380.04)	....
Balance Available	\$343,048.38	\$1,641,161.61
Administrative Costs		
Board Members and		
Administrative Salaries	1,591.51	2,263.88
Clerical Salaries	3,147.08	2,751.84
Fringe Benefits	508.96	609.13
Data Processing Services	944.59	....
Postage	122.10	....
Printing/Duplicating	508.00	....
Office Supplies	85.46	....
Legal Advertising	50.09	60.18
Processing and Printing Films	....	61.50
Board Members and		
Administrative Expenses	425.69	1,084.79
Total Administrative Costs	7,311.48	6,831.32
Advertising Contracts & Agreements		
Milk Promotion Services	328,486.90	1,602,744.96
Dairy Market Development		
Program	6,250.00	11,596.00
Agricultural Enterprises	1,000.00	1,000.00
Dairy Council of Vermont	....	1,250.00
Total Promotion	335,736.90	1,616,590.96
Escrow Account Pending Litigation	....	17,739.33
Balance Forward	....	....

Administration Division

PERSONNEL

William H. Darrow, Jr.
Commissioner 7/1/80-1/16/81
George M. Dunsmore
Commissioner 1/18/81-Appeointed
George M. Dunsmore
Deputy Commissioner 7/1/80-1/18/81
Robert W. Stone
Deputy Commissioner 4/27/81-Appeointed
William H. Rice
Legal Advisor 8/31/81-Appeointed
Gilbert H. Parker
*Chief of Information and Education—
Agriculture Information*
Gail M. Cumming
Private Secretary

BUSINESS OFFICE

Elsie W. LaFlamme
Business Manager
Polly L. Fontana
Administrative Assistant 7/1/80-11/21/80
Roberta S. Harrison
Administrative Assistant 12/8/80-4/10/82
Martha I. Hicks-Robinson
Administrative Assistant 4/11/82-present
Donald R. MacAskill
Account Clerk 7/1/80-12/31/80
Martha I. Hicks-Robinson
Account Clerk 12/1/80-4/10/82
Marie J. Hemenway
Account Clerk 5/3/82-present

Report of the Business Office

The Business Office is assigned the administrative duties for the Department. This office works closely with the Commissioner and Deputy and has direct communication with the program directors, assisting with and establishing departmental policies and procedures.

Responsibilities include complete financial control of expenditures, budget preparations, purchasing of supplies and equipment, preparation of payrolls and time reports, personnel matters, deposits and controls of departmental

receipts, assisting in administering Federal grants, contracts and other related duties.

This office is also responsible for the licensing of all retail establishments selling oleo, milk, meat and Class "C" pesticides in Vermont. Approximately 2,000 licenses are issued annually. The bi-weekly publication of the Department's "Agriview" also falls under the responsibility of this office.

Agricultural Development Division

Stephen R. Kerr, *Director*

Personnel: Geraldine S. Waldo, *Stenographer C* 7/1/80-2/26/82
Amy A. Cavanagh, *Stenographer C* 3/15/82 to present
Everett A. Willard, *Agricultural Marketing Chief*
Bruce A. Martell, *Agriculture Marketing Chief*
Nathan T. Power, *Agricultural Development Specialist* 10/17/80-6/30/82
Richard P. Rogers, *Dairy Products Quality Promotion Chief*
Daniel F. Connor, *Dairy Products Quality Specialist* 2/14/80 to present

Temporary Employees:

Robert C. Wagner, *Agricultural Land Use Consultant* 10/1/80-6/30/82
Robert A. Reese, *Market Development* 10/1/81-6/30/82

The Agricultural Development Division strives to enhance the opportunities which Vermont farmers have to operate profitably. Our activities are, consequently, those which help producers market their products, and can be described as follows:

a) Market Research and Development:

The Division's staff seeks out market opportunities for producers. In the past two years, the Division received funding from the Farmers Home Administration to investigate other-than-dairy market opportunities for farmers in the Connecticut River Valley.

Several important activities have followed this activity, e.g., collective efforts to sell produce to retail groceries; workshops on extended season growing techniques, and grading, handling, and packaging of produce, a trial I.P.M. program for vegetable growers.

The Division purchased a computer to help the maple and Christmas tree industries market their crops.

The Division organized participation by four agricultural companies at the U.S. International Food Show in N.Y.C., the largest such show ever held in the U.S.

b) Product Quality Control:

Vermont's primary marketing advantage is the quality of its products. This has become a truism, yet requires constant attention. The Division supplies practical technical assistance to dairy, poultry, maple, apple and vegetable producers who have challenges which affect the marketability of their products.

c) Commodity Promotion:

The most visible activity of the Division is product

promotion. During the past two years, the Division has established, funded and developed promotional programs for the maple, small fruit and vegetable, and lamb industries. Non-profit promotional Boards were created to sponsor advertising and publicity activities which support the marketing goals of the producers.

The Division actively promotes all Vermont agriculture products through its Seal of Quality promotion and also participates in various fairs and field days to achieve this end.

The Division also manages the Department's participation in resource matters such as the conversion of farmland. This activity bears directly upon the future of farming in our state because land is such a critical ingredient in the production of food.

d) Vermont Milk Flavor Program

The primary objective of the Agricultural Development Division's Dairy Products Chief and Specialist is to ensure that our Vermont milk is consistently of excellent quality when it reaches the marketplace and, eventually, the consumer. This objective is achieved through the implementation and promotion of a market-wide Milk Flavor Program to monitor and improve the quality of fluid milk and cooperation of producers, milk handlers, and retail and wholesale personnel.

We administer the Vermont Milk Flavor Program by providing consulting services to each of the twenty licensed Vermont handlers. Such services include sensory evaluation of raw/finished products, quality control, and working with individual producers experiencing flavor and quality problems—A Milk Plant Quality Program.

We provide in-service training for milk handlers, dairy plant personnel, producers, laboratory staff, and vocational agricultural educators to design and implement milk flavor and dairy product quality programs.

Support services are provided to the dairy industry which include technical assistance for the installation of mechanical milk production and processing equipment; evaluation of applicants for the Vermont Seal of Quality Program; design and implementation of in and out-of-

state retail consulting services (to ensure milk of only excellent quality is marketed); and the design and implementation of Model Plant, Laboratory, and Farm Quality Control Programs.

e) State Stipend Fund

This division has the responsibility of annually distributing the State Stipend Fund to agricultural fairs and field days which are promoting agriculture through competitive exhibits. The Vermont legislature appropriated \$95,511 for this purpose in 1981 and \$90,000 for 1982. The following is a list of how the Stipend Fund was distributed for each of the two years:

	1981	1982
Addison County Farm & Home Field Days, Inc.	\$10,000.00	\$ 9,000.00
Bennington County Field Day Association	324.59	
Caledonia County Fair Association	10,000.00	9,000.00
Champlain Valley Exposition, Inc.	10,000.00	9,000.00
Connecticut Valley Fair, Inc.	8,100.12	6,202.60
Deerfield Valley Farmers' Day Association	3,216.70	3,176.66
Franklin County Field Days	5,264.59	4,575.26
Guilford Fair, Inc.	7,338.54	4,236.62
Lamoille County Field Days, Inc.	none	1,875.25
Orleans County Fair Association	10,000.00	9,000.00
Rutland County Agricultural Society, Inc.	10,000.00	9,000.00
Union Agricultural Society (Tunbridge Fair)	10,000.00	9,000.00
Vermont Farm Show, Inc.	6,829.38	5,869.50
Vermont Maple Festival		6,565.10
Washington County Field Days	2,375.86	1,952.86
Winhall Industrial Society, Inc.	2,061.22	1,546.15
	<u>\$95,511.00</u>	<u>\$90,000.00</u>

Commissioner's cut in 1981 for Department was 4.489 percent of \$100,000 giving us \$95,511 to be distributed.

Commissioner's cut in 1982 for Department gave us \$90,000.00 to be distributed so each recipient's amount was cut 10 percent.



SYMBOL ASSURES BUYER THAT PRODUCT MEETS HIGHEST QUALITY STANDARDS

Vermont Farm Show, Inc.

The Vermont Farm Show continues to be a popular multi-purpose mid-winter agricultural event. The number one objective is to provide a stage and forum for the education of Vermont farmers.

Twelve different agricultural organizations representing nearly every segment of Vermont agriculture have annually developed educational programs for their Vermont Farm Show meetings. These programs are of special value to the increasing number of people who are becoming part or full-time producers of agricultural products.

The increased attendance at the show has caused us to spread these annual meetings to churches and fraternal halls around Barre. We appreciate very much the cooperation of the Barre churches and fraternal organizations for making their facilities available.

It is interesting to note that the number of products entered for judging has been much greater in recent years than it was back in the days when many more farms were in existence. All products entered receive either an excellent award or the judges' reasons for not classifying the entry as excellent. In this way, exhibitors are being educated to make better products available to consumers.

The Vermont Farm Show is very handicapped by a shortage of commercial exhibit space. We presently have potential exhibitors who have been on our waiting list for ten years.

The Vermont Future Farmers of America have two full days of activities as part of the Farm Show. Their activities include many contests associated with the year's educational programs. The FFA clubs also set up competitive exhibits.

Vermont Farm Show, Inc. membership includes:

Vermont Beekeepers Association
Vermont-New Hampshire Potato Growers Association
Vermont Sheep Breeders Association
Vermont Beef Producers Association
Vermont Poultrymen's Association
Vermont Maple Sugar Makers Association
Vermont Horticulture Association
Vermont-New Hampshire Christmas Tree Association
Vermont Plantsmen's Association
Vermont Dairymen's Association

President: Charles Mason—Pawlet

Vice President: Willis Torrey—Brandon

Secretary: Sandra Tarrier—Westford

Treasurer: Heather Whitaker—Williamstown

Manager: Everett Willard—Montpelier

Vermont Crop and Livestock Report

	1981
Total Harvested Acreage of Principal Crops—Acres	540,000
Hay—All Hay (tons)	973,000
Corn Raised for Silage (tons)	1,472,000
Commercial Maple Crop	
Syrup Made—Gallons	545,000
Honey—Colonies of Bees	9,000
Honey Produced—Pounds	405,000
Apples	
Total Commercial Crop—42-Pound Units	667,000
Potatoes	
Total Production—CWT	147,000
Livestock & Products	
Cattle on Farms	339,000
Milk Cows and Heifers, 2 Years and Older	190,000
Total Milk Produced—Millions of Pounds	2,289
Hogs & Pigs on Farms	9,000
Sheep & Lambs	9,200
Poultry	
Hens & Pullets on Farms	325,000
Eggs Produced—Millions	80

Cash Receipts From Farm Marketings—Vermont

Commodity	1981 (1,000 dollars)
Livestock & Products	
Milk	323.7
Cattle & Calves	31.6
Eggs	6.9
Hogs	2.1
Sheep & Lambs	.2
Chickens & Turkeys	.6
Other Livestock	.5
Crops	
Hay	4.6
Potatoes	1.0
Vegetables	2.6
Fruits	
Apples	5.0
Other Fruits & Berries	.4
Other Products	
Forest Products	4.4
Maple Products	9.4
Nursery & Greenhouse	2.2
Miscellaneous	.6
STATE TOTAL	395.9

Report of the Dairy Division

Donald F. George, *Director*

PERSONNEL

Dairy Inspector Supervisor—James W. Emery (*retired 1/81*)

Byron D. Moyer (3/30/81)
promoted from inspector)

District Inspectors—

Stanley Baker
Paul Beebe (12/22/80—
employed)
Laurie Justis (3/30/81—
employed)
Harold Lewis, Jr.
Floyd Lamott (7/1/80—
9/30/80)
Gerald Marckres
Byron Moyer (6/30/80—
3/30/81)
Charles Sartelle, Sr.
George Severance
Durwood Todd
Keith Tupper
Eva Brown
Ina Lamphear

Office Staff—

The dairy industry throughout the nation has increased milk production which has resulted in a surplus of manufactured products. The United States Department of Agriculture through the Commodity Credit Corporation, purchased 1.2 billion dollars worth of surplus commodities during FY 1981 and may surpass 2 billion dollars in FY 1982. As a result U.S.D.A. has depressed the producer payment price and issued a strong ultimatum for the dairy industry to reduce production. Vermont dairy farmers are experiencing lower milk prices even though milk production in Vermont has not increased to the extent of the rest of the nation and New England continues to be deficit market.

Express Foods, Inc. has completed an expansion of the Georgia Whey Plant. The expansion houses ultra-filtration equipment for removing whey protein from whey. The protein is then concentrated and dried into protein powder, which commands a higher price in the food market.

Wyeth International, a pharmaceutical company, has started construction of an infant formula processing plant in the Georgia Industrial Park. Wyeth International will use concentrated whey protein as a base for the infant food. The infant formula will be sold to markets outside of

the U.S.A. The company will house their world research laboratory in the facilities at Georgia as well.

The Vermont Milk Control Board suspended setting producer payment prices effective April 1, 1982. The suspension will remain in effect until July 1, 1983, when a hearing has been scheduled to review the effects of suspended price setting. The Milk Control Board's decision came after hearing testimony from two hearings, which lasted for three days.

On June 4, 1982, Deary Brothers, Inc. of Webster, Massachusetts notified Vermont farmers that they would no longer buy their milk. Deary Brothers, Inc. has lost some of their larger accounts because of a price war in the city marketing area. For the second time in two years a \$300,000 bond on Deary Brothers, Inc. has been collected for distribution to Vermont dairy farmers. Deary Brothers, Inc. has now been sold to George Haseotis, one of the owners of Cumberland Farms, Inc. of Canton, Massachusetts.

The bulk milk tank calibration program, transferred from the Weights and Measures Division to the Dairy Division about two years ago, has developed a new program for calibrating bulk milk tanks with metric measuring devices. The new program converts a metric measurement of the milk in a bulk tank to pounds of milk. The conversion to pounds is necessary as milk purchased from farms is paid for on a price per hundredweight basis.

The Dairy Division has proposed a Milk Quality Enhancement Program for fiscal year 1983. During the past three years, leucocyte counts, which are used as an indicator for mastitis, has been increasing steadily. To assist dairy farmers in increasing net profits per animal and to afford the consumer a better quality product, the State of Vermont should develop a Milk Quality Enhancement Program.

Such a program would mandate that a dairy farmer having problems with high leucocyte counts in his milk would follow parameters set under a milk quality control program. A quality control program in Vermont would consist of two field personnel who would be thoroughly trained in milking practices, milking equipment, sampling and field testing. A full or part-time laboratory technician would be needed for analyzing cow samples to identify specific types of mastitis.

This program would be a cooperative program with the University of Vermont Extension Service and would, therefore, utilize the University Pathology Lab to a great extent. Those farmers who participate in the quality control program would be charged a fee and, thus, the program will become partially self-supporting after the initial establishment.

Summary of Daily Milk Sales by Licensed Dealers in Local Vermont Markets 1980

COUNTY	No. of Dealers	No. of Producers	Qts. Sold Daily	% Pas- teurized Milk	Cream Sold Daily
Addison	3	7	6,954	98.00	276
Bennington	2	11	15,584	100.00	759
Caledonia	2	8	1,160	100.00	88
Chittenden	3	36	38,942	99.00	380
Essex	2	14	187	100.00	3
Franklin	1	0	0	0	2,110
Grand Isle	0	0	0	0	0
Lamoille	2	2	1,494	100.00	730
Orange	2	4	2,599	100.00	0
Orleans	1	4	3,751	100.00	7
Rutland	3	23	17,420	100.00	86
Washington	2	25	20,072	99.00	140
Windham	1	0	3,250	100.00	177
Windsor	2	12	4,485	100.00	694
TOTAL	26	146	158,898		5,450

Due to the concentration of pasteurization plants in the larger urban centers resulting in the crossing of county lines by milk delivery routes, these figures reflect where the milk is processed rather than where it is consumed.



Receipts of Milk by Counties Showing Average Prices, Values & Totals by Month 1980

ADDISON

Month	No. of Milk Patrons	Lbs. of Milk Received	Ave. Price Per Cwt.	Value of Milk
Jan.	235	19,195,364	\$12.95	\$ 2,485,084
Feb.	233	18,559,849	12.95	2,403,038
March.....	233	20,443,065	12.78	2,611,668
April.....	235	20,241,700	12.60	2,550,548
May.....	238	21,195,631	12.50	2,648,825
June.....	242	20,214,899	12.36	2,497,988
July.....	395	26,224,614	12.94	3,393,664
Aug.....	403	30,356,217	13.43	4,075,599
Sept.....	405	29,773,065	13.81	4,112,090
Oct.....	407	30,697,402	14.16	4,346,501
Nov.....	405	29,245,308	14.18	4,146,251
Dec.....	406	30,771,258	14.11	4,341,901
TOTAL	320	296,918,372	\$13.23	\$39,613,157

BENNINGTON

Month	No. of Milk Patrons	Lbs. of Milk Received	Ave. Price Per Cwt.	Value of Milk
Jan.	110	6,374,847	\$13.21	\$ 842,437
Feb.	110	6,185,616	13.23	818,451
March.....	110	6,710,074	13.06	876,423
April.....	109	6,565,991	12.92	848,584
May.....	110	6,975,665	12.87	898,357
June.....	108	6,552,259	12.80	839,245
July.....	109	5,963,570	13.37	797,364
Aug.....	123	6,927,758	13.86	960,368
Sept.....	127	6,849,547	14.23	974,738
Oct.....	128	7,115,175	14.50	1,032,003
Nov.....	128	6,888,901	14.48	997,780
Dec.....	127	7,331,097	14.42	1,057,823
TOTAL	117	80,440,500	\$13.58	\$10,943,573

CALEDONIA

Month	No. of Milk Patrons	Lbs. of Milk Received	Ave. Price Per Cwt.	Value of Milk
Jan.	187	6,720,353	\$14.51	\$ 975,320
Feb.	187	6,712,896	13.52	907,373
March.....	190	7,489,046	13.23	991,114
April.....	194	7,613,042	12.96	986,843
May.....	203	8,068,358	12.79	1,031,956
June.....	197	7,995,696	12.63	1,010,197
July.....	198	7,414,589	13.39	992,822
Aug.....	200	7,563,368	13.98	1,057,287
Sept.....	219	7,750,350	14.73	1,141,709
Oct.....	227	8,242,798	15.21	1,253,823
Nov.....	235	8,057,565	15.29	1,231,852
Dec.....	235	8,881,847	14.83	1,317,092
TOTAL	206	92,509,908	\$13.94	\$12,897,388

CHITTENDEN

Month	No. of Milk Patrons	Lbs. of Milk Received	Ave. Price Per Cwt.	Value of Milk
Jan.	412	23,188,573	\$13.60	\$ 3,153,060
Feb.	409	21,707,369	13.04	2,830,357
March.....	406	24,079,027	12.12	2,919,183
April.....	399	23,992,425	12.46	2,990,258
May.....	395	25,434,409	11.94	3,035,740
June.....	386	24,605,141	12.09	2,975,778
July.....	379	21,919,869	12.54	2,749,074
Aug.....	336	19,417,175	13.48	2,618,338
Sept.....	343	18,489,995	13.47	2,491,198
Oct.....	347	18,601,251	14.18	2,638,842
Nov.....	347	17,300,410	14.37	2,486,434
Dec.....	346	18,050,102	13.69	2,470,826
TOTAL	375	256,785,746	\$13.08	\$33,359,088

ESSEX

Month	No. of Milk Patrons	Lbs. of Milk Received	Ave. Price Per Cwt.	Value of Milk
Jan.	14	673,509	\$11.70	\$ 78,826
Feb.	14	718,780	14.01	100,721
March.....	14	825,391	11.60	95,775
April.....	14	815,823	13.30	108,577
May.....	14	884,160	11.89	105,205
June.....	12	849,661	13.42	114,081
July.....	14	824,746	13.22	109,061
Aug.....	14	795,633	13.63	108,455
Sept.....	15	809,989	13.39	108,505
Oct.....	15	817,891	14.02	114,725
Nov.....	14	719,838	16.66	119,927
Dec.....	13	702,275	15.12	106,247
TOTAL	14	9,437,696	\$13.50	\$ 1,270,105

FRANKLIN

Month	No. of Milk Patrons	Lbs. of Milk Received	Ave. Price Per Cwt.	Value of Milk
Jan.	592	33,956,657	\$13.14	\$ 4,462,211
Feb.	594	32,241,022	12.86	4,149,064
March.....	603	37,096,141	12.70	4,713,423
April.....	611	38,560,028	12.46	4,808,268
May.....	616	42,313,052	11.63	4,923,002
June.....	618	41,819,892	11.43	4,782,798
July.....	613	37,212,773	12.70	4,728,924
Aug.....	551	36,691,897	13.19	4,839,712
Sept.....	552	35,224,951	13.93	4,907,712
Oct.....	552	34,306,782	14.16	4,860,961
Nov.....	550	31,510,498	14.78	4,659,848
Dec.....	550	33,095,581	14.53	4,809,679
TOTAL	584	437,329,274	\$13.13	\$56,645,602

GRAND ISLE

Month	No. of Milk Patrons	Lbs. of Milk Received	Ave. Price Per Cwt.	Value of Milk
Jan.	000	.....	.....	.....
Feb.	000	.....	.....	.....
March.....	000	.....	.....	.....
April.....	000	.....	.....	.....
May.....	000	.....	.....	.....
June.....	000	.....	.....	.....
July.....	000	.....	.....	.....
Aug.....	000	.....	.....	.....
Sept.....	000	.....	.....	.....
Oct.....	000	.....	.....	.....
Nov.....	000	.....	.....	.....
Dec.....	000	.....	.....	.....
TOTAL	000	.....	.....	.....

LAMOILLE

Month	No. of Milk Patrons	Lbs. of Milk Received	Ave. Price Per Cwt.	Value of Milk
Jan.	2	139,548	\$13.52	\$ 18,868
Feb.	2	134,065	13.17	17,662
March.....	2	138,776	13.69	19,004
April.....	2	135,182	12.81	17,567
May.....	2	137,123	12.80	17,565
June.....	2	141,708	12.73	18,053
July.....	2	125,597	13.06	16,411
Aug.....	2	110,781	13.66	15,143
Sept.....	2	108,428	14.35	15,568
Oct.....	2	123,466	14.79	18,263
Nov.....	2	44,200	14.50	6,413
Dec.....	1	31,370	14.37	4,511
TOTAL	2	1,370,244	\$13.62	\$ 185,028

ORANGE

Month	No. of Milk Patrons	Lbs. of Milk Received	Ave. Price Per Cwt.	Value of Milk
Jan.	280	12,239,471	\$16.03	\$ 1,962,772
Feb.	281	11,593,135	16.22	1,881,120
March	282	12,293,468	16.23	1,995,254
April	282	12,198,417	16.07	1,961,087
May	290	9,312,095	16.10	1,499,985
June	275	12,138,559	12.84	1,559,478
July	301	12,054,867	13.37	1,612,853
Aug.	272	10,734,444	13.85	1,487,775
Sept.	295	10,962,205	14.26	1,564,210
Oct.	290	11,406,280	14.57	1,661,971
Nov.	304	11,032,760	14.55	1,605,769
Dec.	285	11,812,748	14.51	1,714,928
TOTAL	286	137,778,449	\$14.88	\$20,507,202

ORLEANS

Month	No. of Milk Patrons	Lbs. of Milk Received	Ave. Price Per Cwt.	Value of Milk
Jan.	296	17,441,697	\$13.13	\$ 2,290,609
Feb.	290	16,602,854	11.29	1,873,949
March	294	19,036,255	12.89	2,452,942
April	300	19,751,419	12.69	2,507,286
May	306	21,637,318	8.01	1,732,488
June	306	21,894,146	10.50	2,298,840
July	310	25,169,406	13.07	3,290,000
Aug.	503	30,997,903	13.51	4,186,288
Sept.	502	29,700,476	13.95	4,144,466
Oct.	496	28,272,982	14.34	4,055,285
Nov.	489	25,435,514	14.34	3,646,513
Dec.	488	26,395,805	14.25	3,761,118
TOTAL	382	282,335,776	\$12.66	\$36,239,784

RUTLAND

Month	No. of Milk Patrons	Lbs. of Milk Received	Ave. Price Per Cwt.	Value of Milk
Jan.	202	10,225,114	\$13.77	\$ 1,408,173
Feb.	202	9,861,413	13.55	1,335,873
March	200	10,873,259	13.39	1,455,532
April	200	10,730,529	13.14	1,410,242
May	203	11,305,490	13.05	1,475,505
June	201	10,956,362	12.82	1,404,209
July	209	10,882,230	13.35	1,453,189
Aug.	207	10,721,059	13.84	1,483,706
Sept.	206	10,590,442	14.24	1,507,993
Oct.	207	10,965,905	14.79	1,622,311
Nov.	207	10,422,484	14.88	1,550,712
Dec.	205	10,885,570	14.77	1,607,640
TOTAL	204	128,419,857	\$13.80	\$17,715,085

WASHINGTON

Month	No. of Milk Patrons	Lbs. of Milk Received	Ave. Price Per Cwt.	Value of Milk
Jan.	249	11,010,541	\$13.31	\$ 1,465,043
Feb.	249	10,326,541	13.38	1,382,150
March	245	11,392,615	13.09	1,491,608
April	243	11,534,017	12.78	1,474,153
May	245	12,220,140	12.55	1,533,040
June	242	12,116,280	12.45	1,508,841
July	241	11,425,625	13.29	1,518,625
Aug.	245	11,372,838	13.83	1,572,528
Sept.	262	11,850,763	14.60	1,730,007
Oct.	266	12,086,305	14.96	1,808,093
Nov.	270	11,298,470	15.03	1,698,542
Dec.	269	11,906,407	14.46	1,721,661
TOTAL	252	138,540,542	\$13.64	\$18,904,291

WINDHAM

Month	No. of Milk Patrons	Lbs. of Milk Received	Ave. Price Per Cwt.	Value of Milk
Jan.	549	30,965,609	\$13.30	\$ 4,117,240
Feb.	527	29,011,632	13.31	3,862,404
March	543	31,876,606	13.13	4,186,387
April	527	31,163,383	12.97	4,041,300
May	519	32,375,034	12.89	4,172,336
June	514	31,333,567	12.69	3,974,735
July	477	13,478,047	13.26	1,786,885
Aug.	5	604,189	13.74	83,024
Sept.	5	608,606	14.19	86,373
Oct.	5	632,266	14.74	93,168
Nov.	5	612,607	14.85	90,960
Dec.	5	640,774	14.74	94,462
TOTAL	307	203,302,320	\$13.65	\$26,589,274

WINDSOR

Month	No. of Milk Patrons	Lbs. of Milk Received	Ave. Price Per Cwt.	Value of Milk
Jan.	12	1,219,946	\$13.75	\$ 167,719
Feb.	12	1,190,538	13.74	163,561
March	12	1,280,811	13.45	172,311
April	12	1,268,389	13.46	170,758
May	12	1,304,792	13.36	174,337
June	12	1,226,530	11.77	144,307
July	12	1,279,713	11.70	149,706
Aug.	12	1,111,748	14.12	156,988
Sept.	12	1,090,634	14.50	158,182
Oct.	12	1,091,388	14.99	163,650
Nov.	12	1,055,588	15.21	160,545
Dec.	13	1,092,016	15.16	165,588
TOTAL	12	14,212,093	\$13.77	\$ 1,947,652

Receipts of Milk by Counties Showing Average Prices & Values—1980

County	No. of Milk Patrons	Lbs. of Milk Received	Ave. Price Per Cwt.	Value of Milk
Addison	320	296,918,372	\$13.23	\$ 39,613,157
Bennington	117	80,440,500	13.58	10,943,573
Caledonia	206	92,509,908	13.94	12,897,388
Chittenden	375	256,785,746	13.08	33,359,088
Essex	14	9,437,696	13.50	1,270,105
Franklin	584	437,329,274	13.13	56,645,602
Grand Isle	—	—	—	—
Lamoille	2	1,370,244	13.62	185,028
Orange	286	137,778,449	14.88	20,507,202
Orleans	382	282,335,776	12.66	36,239,784
Rutland	204	128,419,857	13.80	17,715,085
Washington	252	138,540,542	13.64	18,904,291
Windham	307	203,302,320	13.65	26,589,274
Windsor	12	14,212,093	13.77	1,947,652
TOTAL	3,061	2,079,380,777	\$13.31	\$276,817,229

Summary of Vermont Dairy Statistics Showing Distribution of Product 1980

	Number of Plants	Pounds
Fluid Milk Shipped	31	1,163,475,394
Fluid Milk Made into Cheddar Cheese	5	269,762,026
Fluid Milk Made into Foreign Type Cheese	5	534,969,330
Fluid Milk Made into Powder	1	1,388,104
Fluid Milk Made into Ice Cream & Ice Cream Mix	8	3,997,519
Fluid Milk Sold Locally	25	130,850,526
Sweet Cream Shipped	12	47,770,331
Sweet Cream Made into Butter	5	9,859,380
Sweet Cream Sold Locally	21	5,779,755
Skim Shipped	5	14,269,675
Skim Condensed & Evaporated	2	128,749,953
Skim Made into Powder	2	110,915,663
Skim Made into Cottage & Soft Cheese	5	46,283,899
Skim Sold Locally	18	7,292,643
Skim Otherwise Utilized	5	130,505,149
Low Fat Milk Sold Locally	13	26,505,695
Whey Made into Powder	1	1,610,249

Fluid Milk Received in Plants & Percentage Shipped 1980

County	Lbs. of Milk Received as Fluid Milk	Lbs. of Milk Shipped as Fluid Milk	Percent Shipped	No. of Plants Receiving Milk	No. of Plants Shipping Milk
Addison	296,918,372	115,140,203	39	7	6
Bennington	80,440,500	198,103,470	—	3	3
Caledonia	92,509,908	70,367,712	76	3	1
Chittenden	256,785,746	20,047,000	8	6	2
Essex	9,437,696	—	—	1	1
Franklin	437,329,274	108,858,273	25	3	1
Grand Isle	—	—	—	—	—
Lamoille	1,370,244	—	—	2	2
Orange	137,778,449	116,158,545	84	5	3
Orleans	282,335,776	90,923,751	32	5	4
Rutland	128,419,857	75,942,636	59	7	4
Washington	138,540,542	32,876,257	24	3	1
Windham	203,302,320	203,302,320	100	3	3
Windsor	14,212,093	122,755,218	—	2	2
TOTAL	2,079,380,777	1,163,475,394	56	50	31

Due to milk crossing county lines, receipts and shipments do not balance.



Summary of Daily Milk Sales by Licensed Dealers in Local Vermont Markets 1981

COUNTY	No. of Dealers	No. of Producers	Qts. Sold Daily	% Pas- teurized Milk Sold	Cream Sold Daily
Addison	3	7	6,106	98.00	122
Bennington	3	11	16,715	100.00	723
Caledonia	2	6	12,182	100.00	7
Chittenden	3	37	38,648	99.00	315
Essex	0	0	—	—	—
Franklin	0	0	—	—	—
Grand Isle	0	0	—	—	—
Lamoille	1	1	490	100.00	—
Orange	2	3	2,833	100.00	—
Orleans	0	0	—	—	—
Rutland	4	22	16,284	99.00	1,547
Washington	1	24	21,773	100.00	142
Windham	2	1	4,662	99.00	1,950
Windsor	2	12	41,044	100.00	646
TOTAL	24	124	160,737		5,452

Due to the concentration of pasteurization plants in the larger urban centers resulting in the crossing of county lines by milk delivery routes, these figures reflect where the milk is processed rather than where it is consumed.



Receipts of Milk by Counties Showing Average Prices, Values & Totals by Month, 1981

ADDISON				
Month	No. of Milk Patrons	Lbs. of Milk Received	Ave. Price Per Cwt.	Value of Milk
Jan.	338	25,221,273	\$14.08	\$ 3,552,358
Feb.	338	23,409,816	14.03	3,283,973
March.....	341	26,784,681	13.75	3,683,010
April	339	26,350,927	13.50	3,557,996
May	338	27,441,010	13.73	3,767,012
June	340	25,830,743	13.30	3,434,532
July	340	24,919,477	13.79	3,436,869
Aug.	344	28,529,128	14.20	4,051,390
Sept.	342	23,314,800	14.40	3,356,353
Oct.	341	23,167,168	14.36	3,326,191
Nov.	338	22,408,544	14.27	3,197,491
Dec.	339	24,047,188	14.00	3,365,945
TOTAL	340	301,424,755	\$13.94	\$42,013,120

BENNINGTON				
Month	No. of Milk Patrons	Lbs. of Milk Received	Ave. Price Per Cwt.	Value of Milk
Jan.	306	12,505,030	\$14.06	\$ 1,758,513
Feb.	302	11,494,296	14.06	1,615,621
March.....	304	13,445,682	13.79	1,853,662
April	306	14,053,406	13.66	1,919,986
May	308	15,747,061	13.44	2,115,925
June	307	15,786,694	13.39	2,114,026
July	306	15,136,510	13.86	3,098,284
Aug.	305	15,208,321	14.16	2,153,104
Sept.	305	14,397,769	14.36	2,067,318
Oct.	304	13,511,567	14.46	1,954,141
Nov.	274	11,095,926	14.22	1,577,906
Dec.	273	11,513,055	13.95	1,606,554
TOTAL	300	163,895,317	\$13.96	\$22,835,040

CALEDONIA

Month	No. of Milk Patrons	Lbs. of Milk Received	Ave. Price Per Cwt.	Value of Milk
Jan.	234	9,716,108	\$13.79	\$ 1,340,128
Feb.	234	8,903,704	13.67	1,217,143
March.....	233	9,481,216	14.39	1,364,545
April.....	229	9,223,442	13.88	1,280,015
May.....	228	9,646,302	13.62	1,314,288
June.....	223	9,045,231	13.54	1,225,160
July.....	215	8,332,623	14.27	1,188,720
Aug.....	224	8,165,212	14.71	1,200,881
Sept.....	225	8,048,883	15.25	1,227,150
Oct.....	225	8,232,819	15.57	1,281,544
Nov.....	225	8,021,235	15.38	1,234,041
Dec.....	227	8,793,661	14.65	1,288,494
TOTAL	227	105,610,436	\$14.36	\$15,162,109

CHITTENDEN

Month	No. of Milk Patrons	Lbs. of Milk Received	Ave. Price Per Cwt.	Value of Milk
Jan.	346	18,575,859	\$13.66	\$ 2,537,302
Feb.	363	17,400,064	14.15	2,461,806
March.....	381	21,011,565	14.63	3,074,537
April.....	381	21,244,149	14.44	3,067,259
May.....	388	23,353,086	14.25	3,327,317
June.....	402	22,939,910	13.93	3,194,916
July.....	399	22,160,358	14.36	3,183,137
Aug.....	403	21,995,504	14.80	3,256,372
Sept.....	405	21,305,122	15.04	3,204,752
Oct.....	412	20,608,897	15.41	3,174,893
Nov.....	410	19,533,406	15.12	2,954,132
Dec.....	410	20,740,828	14.85	3,080,815
TOTAL	392	250,868,748	\$14.56	\$36,517,238

ESSEX

Month	No. of Milk Patrons	Lbs. of Milk Received	Ave. Price Per Cwt.	Value of Milk
Jan.	000	.....	.....	.....
Feb.	000	.....	.....	.....
March.....	000	.....	.....	.....
April.....	000	.....	.....	.....
May.....	000	.....	.....	.....
June.....	000	.....	.....	.....
July.....	000	.....	.....	.....
Aug.....	000	.....	.....	.....
Sept.....	000	.....	.....	.....
Oct.....	000	.....	.....	.....
Nov.....	000	.....	.....	.....
Dec.....	000	.....	.....	.....
TOTAL	000	.....	.....	.....

FRANKLIN

Month	No. of Milk Patrons	Lbs. of Milk Received	Ave. Price Per Cwt.	Value of Milk
Jan.	552	32,972,204	\$14.53	\$ 4,789,520
Feb.	552	30,457,866	14.11	4,297,137
March.....	550	35,339,548	13.82	4,885,320
April.....	546	35,495,804	13.66	4,843,429
May.....	546	38,046,081	12.31	4,683,442
June.....	537	36,098,104	12.13	4,377,813
July.....	528	34,249,424	13.51	4,661,234
Aug.....	528	34,386,211	14.03	4,822,722
Sept.....	527	32,762,407	14.33	4,693,352
Oct.....	520	31,632,373	14.66	4,636,474
Nov.....	518	29,664,728	14.46	4,289,945
Dec.....	518	31,488,081	14.13	4,448,681
TOTAL	535	402,592,831	\$13.77	\$55,429,069

GRAND ISLE

Month	No. of Milk Patrons	Lbs. of Milk Received	Ave. Price Per Cwt.	Value of Milk
Jan.	000	.....	.....	.....
Feb.	000	.....	.....	.....
March.....	000	.....	.....	.....
April.....	000	.....	.....	.....
May.....	000	.....	.....	.....
June.....	000	.....	.....	.....
July.....	000	.....	.....	.....
Aug.....	000	.....	.....	.....
Sept.....	000	.....	.....	.....
Oct.....	000	.....	.....	.....
Nov.....	000	.....	.....	.....
Dec.....	000	.....	.....	.....
TOTAL	000	.....	.....	.....

LAMOILLE

Month	No. of Milk Patrons	Lbs. of Milk Received	Ave. Price Per Cwt.	Value of Milk
Jan.	1	48,985	\$13.50	\$ 6,614
Feb.	1	41,702	13.50	5,629
March.....	1	47,475	13.50	6,409
April.....	1	40,528	13.50	5,471
May.....	1	40,563	13.50	5,476
June.....	1	40,111	13.50	5,414
July.....	1	45,251	13.50	6,108
Aug.....	1	53,543	13.50	7,228
Sept.....	1	55,632	13.50	7,510
Oct.....	1	58,852	13.50	7,945
Nov.....	1	41,843	13.50	5,648
Dec.....	1	43,344	13.50	5,851
TOTAL	1	557,829	\$13.50	\$ 75,303

ORANGE

Month	No. of Milk Patrons	Lbs. of Milk Received	Ave. Price Per Cwt.	Value of Milk
Jan.	285	12,132,491	\$14.59	\$ 1,769,583
Feb.	283	11,216,158	14.39	1,614,204
March.....	284	12,767,009	14.30	1,826,108
April.....	282	12,575,627	14.19	1,783,885
May.....	295	14,241,461	13.97	1,988,919
June.....	122	14,047,581	13.86	1,946,983
July.....	300	13,319,020	14.33	1,907,984
Aug.	300	13,160,630	14.61	1,922,526
Sept.	300	13,148,547	14.84	1,950,702
Oct.	303	13,037,383	15.00	1,955,666
Nov.	300	12,522,482	14.81	1,854,002
Dec.	298	13,489,777	14.53	1,959,680
TOTAL	279	155,658,166	\$14.44	\$22,480,242

ORLEANS

Month	No. of Milk Patrons	Lbs. of Milk Received	Ave. Price Per Cwt.	Value of Milk
Jan.	202	15,466,819	\$14.60	\$ 2,258,366
Feb.	200	14,242,589	14.47	2,061,316
March.....	203	16,365,518	14.28	2,336,596
April.....	220	17,773,313	14.00	2,488,759
May.....	225	18,350,423	13.83	2,537,919
June.....	206	17,670,381	13.70	2,420,240
July.....	204	17,472,578	14.25	2,490,111
Aug.	204	17,746,206	14.59	2,589,582
Sept.	312	22,121,947	14.89	3,293,784
Oct.	311	22,434,970	14.99	3,362,878
Nov.	308	21,354,369	14.88	3,176,809
Dec.	310	22,541,068	14.73	3,321,118
TOTAL	242	223,540,181	\$14.47	\$32,337,478

RUTLAND

Month	No. of Milk Patrons	Lbs. of Milk Received	Ave. Price Per Cwt.	Value of Milk
Jan.	269	16,975,395	\$14.86	\$ 2,522,650
Feb.	268	15,546,827	14.71	2,286,280
March.....	268	17,662,062	14.43	2,547,872
April.....	246	16,061,727	14.22	2,284,779
May.....	243	17,117,504	13.71	2,346,881
June.....	245	16,223,622	13.52	2,193,299
July.....	243	15,505,062	13.95	2,163,652
Aug.	242	15,191,633	14.29	2,171,330
Sept.	143	10,919,502	14.62	1,595,934
Oct.	145	10,884,639	14.91	1,622,422
Nov.	145	10,436,188	14.61	1,524,742
Dec.	144	11,083,935	14.46	1,602,514
TOTAL	217	173,608,096	\$14.32	\$24,862,355

WASHINGTON

Month	No. of Milk Patrons	Lbs. of Milk Received	Ave. Price Per Cwt.	Value of Milk
Jan.	272	12,167,553	\$14.63	\$ 1,780,061
Feb.	272	11,060,939	14.72	1,628,176
March.....	278	12,640,321	14.11	1,783,007
April.....	272	12,891,321	13.64	1,758,250
May.....	272	13,554,352	13.34	1,808,206
June.....	269	13,224,820	13.27	1,754,783
July.....	270	12,347,137	14.02	1,731,015
Aug.	271	12,120,884	14.44	1,750,395
Sept.	269	11,822,061	14.98	1,771,173
Oct.	271	11,477,892	15.27	1,753,042
Nov.	271	10,864,191	15.09	1,639,578
Dec.	269	11,758,913	14.31	1,682,131
TOTAL	271	145,930,384	\$14.28	\$20,839,817

WINDHAM

Month	No. of Milk Patrons	Lbs. of Milk Received	Ave. Price Per Cwt.	Value of Milk
Jan.	54	3,708,048	\$14.35	\$ 532,253
Feb.	54	3,401,432	14.35	488,242
March.....	54	3,894,046	14.09	548,826
April.....	54	3,789,575	13.96	529,176
May.....	54	3,986,483	13.75	548,300
June.....	55	3,608,338	13.72	495,208
July.....	54	3,527,202	14.19	500,651
Aug.	42	2,986,855	14.50	433,213
Sept.	42	2,929,455	14.68	430,161
Oct.	43	3,012,793	14.76	444,806
Nov.	43	2,981,959	14.55	433,989
Dec.	43	3,208,538	14.29	458,625
TOTAL	49	41,034,724	\$14.24	\$ 5,843,450

WINDSOR

Month	No. of Milk Patrons	Lbs. of Milk Received	Ave. Price Per Cwt.	Value of Milk
Jan.	13	1,208,155	\$15.14	\$ 182,918
Feb.	13	1,125,136	15.07	169,580
March.....	13	1,289,324	14.83	191,157
April.....	13	1,269,732	14.62	185,615
May.....	12	1,247,205	14.32	178,661
June.....	12	1,149,710	14.18	163,023
July.....	12	1,103,785	14.57	160,790
Aug.	12	1,067,550	15.01	160,280
Sept.	12	1,024,268	15.10	154,713
Oct.	12	1,049,285	15.42	161,824
Nov.	12	1,018,861	15.12	154,014
Dec.	12	1,141,784	14.93	170,416
TOTAL	12	13,694,795	\$14.84	\$ 2,032,991

Receipts of Milk by Counties Showing Average Prices & Values—1981

County	No. of Milk Patrons	Lbs. of Milk Received	Ave. Price Per Cwt.	Value of Milk
Addison	340	301,424,755	\$13.94	\$ 42,013,120
Bennington	300	163,895,317	13.96	22,835,040
Caledonia	227	105,610,436	14.36	15,162,109
Chittenden	392	250,868,748	14.56	36,517,238
Essex	0	—	—	—
Franklin	535	402,592,831	13.77	55,429,069
Grand Isle	0	—	—	—
Lamoille	1	557,829	13.50	75,303
Orange	279	155,658,166	14.44	22,480,242
Orleans	242	223,540,181	14.47	32,337,478
Rutland	217	173,608,096	14.32	24,862,355
Washington	271	145,930,384	14.28	20,839,817
Windham	49	41,034,724	14.24	5,843,450
Windsor	12	13,694,795	14.84	2,032,991
TOTAL	2,865	1,978,416,262	\$14.18	\$280,428,212

Summary of Vermont Dairy Statistics Showing Distribution of Product 1981

	Number of Plants/ Units	Pounds
Fluid Milk Shipped	23	1,173,015,416
Fluid Milk Made into Cheddar Cheese	6	272,157,225
Fluid Milk Made into Foreign Type Cheese	5	577,321,579
Fluid Milk Made into Powder	1	1,911,406
Fluid Milk Made into Ice Cream & Ice Cream Mix	8	2,435,716
Fluid Milk Sold Locally	25	125,150,708
Sweet Cream Shipped	10	61,105,913
Sweet Cream Made into Butter	4	4,193,442
Sweet Cream Sold Locally	18	5,280,121
Skim Shipped	6	14,982,376
Skim Condensed & Evaporated	1	110,671,174
Skim Made into Powder	1	102,016,963
Skim Made into Cottage & Soft Cheese	4	61,712,116
Skim Sold	17	15,561,384
Skim Otherwise Utilized	2	43,841,689
Low Fat Milk Sold Locally	11	29,507,034
Concentrated Whey	1	23,070,327

Fluid Milk Received in Plants & Percentage Shipped 1981

County	Lbs. of Milk Received as Fluid Milk	Lbs. of Milk Shipped as Fluid Milk	Percent Shipped	No. of Units Receiving Milk	No. of Units Shipping Milk
Addison	301,424,755	36,385,515	12	5	3
Bennington	163,895,317	291,243,561	—	2	2
Caledonia	105,610,436	94,138,895	89	2	1
Chittenden	250,868,748	48,764,484	19	5	3
Essex	0	0	—	0	0
Franklin	402,592,831	101,203,468	25	2	2
Grand Isle	0	0	—	0	0
Lamoille	557,829	0	—	1	0
Orange	155,658,166	141,192,534	90	5	3
Orleans	223,540,181	144,441,710	64	2	2
Rutland	173,608,096	157,663,520	90	7	4
Washington	145,930,384	29,854,491	20	2	1
Windham	41,034,724	6,445,625	15	2	1
Windsor	13,694,795	121,681,613	—	1	2
TOTAL	1,978,416,262	1,173,015,416	59	36	24

Due to milk crossing county lines, receipts and shipments do not balance.

Report of the Livestock Division

David U. Walker, D.V.M., *Director*

Personnel

Federal Personnel (Animal & Plant Health Inspection Service, USDA)

Office

Marilyn J. Christie
Kathryn A. Gladden
Joan L. Tucker

Steno C
Clerk B
Clerk B

Field Inspectors

J. Cyril French
George Lafirira
Carley Newcity
Phil Urie

Livestock Inspector
Livestock Inspector
Compliance Officer
Livestock Inspector

116 Accredited and Licensed Fee Basis Veterinarians

Dr. David Galbreath

Dr. Peggy W. Larson

Dr. James E. Wheeler (Canadian-Vermont
Ports of Entry)

Georgia S. Amet

Joseph Giallombardo, Jr.

Steve Chicoine

David McKenzie

Wendell Shields

Veterinary Medical Officer

Veterinary Medical Officer

Veterinary Medical Officer

Programs-Records Clerk

Animal Health Technician

Animal Health Technician

Animal Health Technician

Animal Health Technician

Meat and Poultry Inspection Service

Administration

Dr. David U. Walker
Dr. Amos Wilson

Director
Veterinarian - Meat Inspection

Office

Monique Washburn

Typist C

Inspectors

Carl Cushing
Victor Dunbar
Bruce Farnham
Lawrence Gorman

Meat Inspector
Meat Inspector
Meat Inspector
Meat Inspector

Paul Heller

Victoria Jamison

Mansur Kerwin

Albert Kittredge

Frank Leavitt

Hugh Lund

Stanley Marshia

Chester Nosek

Walter Sylvester

Paul Taylor

Compliance & Evaluation Officer

Meat Inspector

Meat Inspector

Meat Inspector

Meat Inspector

Meat Inspector

Meat Inspector

Meat Inspector

Meat Inspector

Meat Inspector

Program Summary

Legislative action has delegated the authority and responsibility to the Livestock Division for implementing the following programs:

1. Enforcement of regulations regarding the health of animals and poultry imported from other states and countries in order to protect the animal and human population of Vermont from infectious and contagious diseases.

2. Eradication of Bovine Tuberculosis.

a. area testing of cattle.

b. supervision of tests for herd accreditation and interstate shipment of cattle and milk.

3. Eradication of Brucellosis.

4. Eradication of Hog Cholera.

5. Control and eradication of miscellaneous infectious and contagious diseases of livestock and poultry.

6. Licensing, bonding and supervision of livestock dealers and commission sales.

7. Licensing and bonding of live poultry dealers.

8. Licensing and inspection of pregnant mare urine collection farms.

9. Licensing and inspection of garbage feeding to swine.

10. Regulation of importation and sale of psittacine birds.

11. Disinfection service.

12. Rabies control.

13. Meat Inspection Service.

14. Animal Welfare Act.

15. Horse Pulling.

16. Livestock Branding.

Meat Inspection

Assessing trends in the Vermont meat food industry during this biennium gives the impression of a time of turmoil. Questions have arisen concerning how best to administer this program satisfying the needs of both public and agricultural industry. Faced with an imminent budget cut, the Department recommended returning the state meat inspection program to the Federal government. Reasoning was that the program would continue under Federal mandate; that Vermont personnel would be hired and that the public would continue to be protected. Industry disagreed and pressure on this Department and the Legislature from the Vermont Farm Bureau, Grange and alternative agriculture producers resulted in restoration of monies necessary to maintain the state meat inspection program and which remains the only state program in the Northeast.

Meat Inspection is a consumer protection program designed to protect the public health. Basically antemortem inspection, postmortem inspection, product reinspection and retail store inspection are carried out in order that only wholesome, properly labeled meat food

products are marketed. However, the program additionally offers ancillary services such as disease surveillance sampling for many livestock diseases especially those of public health significance.

Vermont is the largest livestock producing state in New England and as a consequence the well-being of agriculture has a more marked effect on the health of this state's economy. Official agricultural policy centers on promoting diversification of industry into production of livestock other than dairy primarily for local consumption. Concern of industry is that there are no federally inspected plants within this state which slaughter livestock other than beef. Maintenance of a viable state meat inspection program, it would appear, is a necessity, given current circumstances, to development of alternative agriculture.

This essential public health program, including retail inspection, seems to enjoy strong public support. Maintenance of a state meat inspection program will allow alternative agriculture producers a chance to market their production in commercial channels with a guarantee to the consuming public that it has been inspected.

Licensed Establishments

	1981	1982
Retail Markets	1111	1100
Wholesalers	34	31
Commercial Processors	22	24
Custom Processors	36	34
Commercial Slaughterhouses	19	19
Commercial Poultry Slaughterhouses	7	6
Custom Slaughterhouses	9	9
4-D Handlers	10	8
Renderers	5	4
Animal Food Manufacturers	2	2

Custom Slaughter

July 1, 1980-June 30, 1981

Species	No. Head	Pounds
Cattle	855	536,110
Calves	98	15,718
Swine	2,317	425,780
Sheep	167	6,982
Goats	1	42

Custom Slaughter

July 1, 1981-June 30, 1982

Species	No. Head	Pounds
Cattle	443	276,063
Calves	25	3,437
Swine	857	166,710
Sheep	156	6,544
	1,481	452,754

Retail C & E Inspection

July 1, 1980-June 30, 1981	1,985
July 1, 1981-June 30, 1982	2,491

Product Condemnation

July 1, 1980-June 30, 1981

Retail Condemnations	Processing Condemnations
31,466 lbs.	3,801 lbs.

July 1, 1981-June 30, 1982

Retail Condemnations	Processing Condemnations
3,739 lbs.	31,814 lbs.

Commercial Slaughter

July 1, 1980-June 30, 1981

Species	No. Head	Pounds
Cattle	6,187	3,436,613
Swine	7,679	1,492,042
Sheep	2,138	101,036
Calves	563	84,833
Goats	68	2,519

TOTAL pounds condemned - Est. Wt.

38,415 lbs. (56 carcasses - 125 parts - 1,454 livers)

Commercial Slaughter

July 1, 1981-June 30, 1982

Species	No. Head	Pounds
Cattle	6,304	3,438,266
Swine	5,797	1,109,770
Sheep	2,616	122,394
Calves	504	84,135
Goats	97	3,250

TOTAL pounds condemned - Est. Wt.

45,591 lbs. (69 carcasses - 131 parts - 1,152 livers)

Processing Production

July 1, 1980-June 30, 1981	3,840,965 lbs.
July 1, 1981-June 30, 1982	3,298,131 lbs.

The Livestock Division programs have been implemented with two long-range goals: one for protection of the public health, safety and welfare, by eradication of diseases transmissible or communicable to humans and; two, to control and/or eradicate livestock diseases which, if uncontrolled, would be economically disastrous to Vermont's livestock industry. Many of these programs are mandated by state and federal laws governing the shipment of livestock and marketing of milk in interstate marketing channels. In conjunction with all disease and surveillance programs, ample authority to quarantine and perform diagnostic tests are mandated by state law.

The most important livestock programs are carried out under memoranda of agreement with the United States Department of Agriculture as cooperative disease control or eradication programs in which both state and federal governments contribute roughly equal funding, equipment and personnel. The Livestock Division has enjoyed cooperation with other state agencies namely, Public Safety, Fish and Game, Water Resources and Public Health, in addition to the Extension Service and the University of Vermont, College of Agriculture.

Livestock disease control/eradication programs are, for the most part, continuing surveillance programs. Programs of this type when properly funded and adequately staffed give an overview of the entire livestock population resulting in early detection of disease infections and confining outbreaks to small portions of the industry. Such programs have proven themselves effective and a great dollar saving by preventing widespread outbreaks of disease. They are the most effective form of preventative medicine.

Brucellosis

Concern for the future protection of the dairy industry from brucellosis, especially with projected budget cuts by USDA, seems to hinge on implementation of more stringent regulations governing movement of cattle from high risk states.

Vermont, as of June 27, 1982, is eligible for designation under the national program as a Brucellosis Free Status State (a state free of brucellosis in all species for 12 months). It is anticipated that occasional infection will be imported into the State from currently infected areas in the normal course of interstate commerce. Brucellosis spreads in explosive fashion if left undetected. Stringent application of surveillance procedures are necessary for the foreseeable future to guard against spread of this disastrous disease.

Milk Ring Tests

	No. Visits	No. Samples	No. Suspicious
7/1/80-6/30/81	472	37,059	43
7/1/81-6/30/82	384	35,784	12

Blood Tests and Vaccinations

July 1, 1980-June 30, 1981

Herds Tested	Animals Tested	Calf Vaccinations
5,636	39,200	19,267
5,512	39,009	19,872

Market Swine Testing

July 1, 1980 to June 30, 1981	2,017
July 1, 1981 to June 30, 1982	1,402

Backtags Applied

July 1, 1980 to June 30, 1981	56,924
July 1, 1981 to June 30, 1982	60,516

Indemnity Claims—Brucellosis

	No. Claims	No. Animals	Amount Paid
July 1, 1980-June 30, 1981	20	129	\$25,007.58
July 1, 1981-June 30, 1982	5	65	12,396.37

Tuberculosis

Vermont experienced its first tuberculosis outbreak in nearly 25 years when a large dairy herd in Sheldon revealed three confirmed reactors on July 7, 1981. Once a herd has confirmed tuberculosis infection, it is assumed that the disease cannot be eradicated and recommendations both state and national are that the herd in question be immediately and totally depopulated. Recommended policy was followed, the herd depopulated and the owner paid indemnity from State and Federal funds.

Extensive epidemiological studies and traceback testing was conducted with all animals from the herd of origin, which had been sold to other persons, destroyed. No further infection as a result of spread has been detected. A tuberculosis surveillance program is regularly carried out with cattle herds in one-fourth the towns in each county tested annually on a rotating basis.

Indemnity Claims—Tuberculosis

	No. Claims	No. Animals	Amount Paid
July 1, 1980-June 30, 1981	0	0	0
July 1, 1981-June 30, 1982	7	190	\$30,041.79

Garbage Feeding Licenses

1980-1981	
Number Cooking Permits Issued	5
Number Hogs Fed Garbage	360
1981-1982	
Number Cooking Permits Issued	5
Number Hogs Fed Garbage	346

Tuberculosis Area Testing

	No. Herds	No. Cattle	No. Suspects
7/1/80-6/30/81	936	47,893	24
7/1/81-6/30/82	1,134	58,899	57

Connecticut Milk Market Testing

	No. Herds	No. Cattle	No. Suspects
7/1/80-6/30/81	564	37,557	10
7/1/81-6/30/82	612	41,082	40

Owner's Testing

	No. Herds	No. Cattle	No. Suspects
7/1/80-6/30/81	1,672	14,752	—
7/1/81-6/30/82	1,894	14,833	12

Tuberculosis Testing—Goats

	No. Herds	No. Goats	No. Suspects
7/1/80-6/30/81	26	135	—
7/1/81-6/30/82	26	104	—

Commission Sale Report

July 1, 1980-June 30, 1981

Slaughter Cattle	Dairy Cattle	Calves Sold	Amount of Sales	Unclassified
24,706	4,470	59,084	\$18,850,836.56	5,119

July 1, 1981-June 30, 1982

Slaughter Cattle	Dairy Cattle	Calves Sold	Amount of Sales	Unclassified
25,180	4,167	54,050	\$16,494,156.09	4,261

Poultry

The Livestock Division cooperates in the National Poultry Improvement Plan established to eradicate egg transmitted diseases of poultry. Testing is free to Vermont residents and is performed on poultry producing hatching eggs for major breeders marketing chicks. Hatching is done, for the most part, outside the state at a major hatchery in New Hampshire. However, requirements for sale and movement of hatching eggs in interstate commerce are that birds in breeder be free of pullorum-typhoid and mycoplasma infections. Although a small program in Vermont, poultry testing is given priority status in order that a lucrative market be maintained.

Rabies

State law requires that dogs be vaccinated with an acceptable rabies vaccine prior to licensing. If 75-80% of domestic pets are adequately immunized, any outbreak of rabies in domestic animals will be controlled. A major obstacle in this area is loss of a vehicle for taking a census of dogs, i.e. (the poll tax). There have been recommendations in this area, but none as yet have been implemented.

Scrapie Mange (cattle scabies)

Cattle scabies is a reportable and quarantinable skin disease of cattle caused by a mite, *sarcoptes scabiei*, which spreads rapidly resulting in extreme discomfort to affected animals. Humans can be infected. Although not a fatal condition, infection results in lowered production of both meat and milk. Diagnosis is made at the Department by microscopic examination of skin scrapings and once confirmed, herds are sprayed with lime sulphur solutions at high pressure three times at 10-day intervals.

Fair Inspections

Department personnel attend to disinfection of fair-ground barns prior to entry of livestock for exhibition purposes. Management and industry alike are pressuring this department to have a representative for longer periods of time each year to ensure that proper health papers are displayed. Additionally the department has collected urine from pulling horses to determine whether or not animals have been drugged.

Cattle Imported

July 1, 1980-June 30, 1981

No. Cattle imported from Canada	749
No. Cattle imported from Other States	5,540
No. Import Releases Issued	1,119

July 1, 1981-June 30, 1982

No. Cattle imported from Canada	622
No. Cattle imported from Other States	4,549
No. Import Releases Issued	1,060

Cattle Exported

July 1, 1980-June 30, 1981	4,923
July 1, 1981-June 30, 1982	4,222

Imported Cattle Retested for Brucellosis

July 1, 1980-June 30, 1981

Herds	Animals Tested
1,033	5,672

July 1, 1981-June 30, 1982

Herds	Animals Tested
1,031	5,806

Livestock Dealers

July 1, 1980-June 30, 1981

	Total Licenses Issued
Resident Dealers	87
Non-resident Dealers	31
Commission Sales	6
	124

July 1, 1981-June 30, 1982

	Total Licenses Issued
Resident Dealers	76
Non-resident Dealers	33
Commission Sales	6
	115

Report From The Animal Diagnostic Laboratory Animal Health Section, Department of Animal Sciences University of Vermont

Effective July 1, 1981 the Departments of Animal Pathology and Animal Sciences were merged to form a new Department of Animal Sciences with Dr. Leonard Bull as chairman. The former Animal Pathology unit is now designated as the Animal Health Section. This merger enables a broader approach and better use of specialists in nutrition, physiology, reproduction, management and health in solving disease problems on Vermont farms.

In the spring of 1982, the diagnostic laboratory facilities as well as the professional and technical staff in the Animal Health Section were reviewed by a peer group of diagnosticians and practicing veterinarians from the northeastern states. Although final review recommendations are still in process, we have already made a number of improvements in techniques and services with other changes anticipated. The final result will provide services for veterinarians which will be rapid and accurate using modern laboratory methods with a well-trained technical staff. Expensive, low-volume tests will be forwarded to larger laboratories in other states.

Abortions and breeding problems continue to cause major losses in the Vermont dairy industry. Mastitis and respiratory diseases in newborn calves also contribute substantially to losses. Research is providing new answers for some of these problems. Good management is most important and preventive herd health with your local veterinarian on a regular routine basis will pay real dividends.

Our diagnostic staff members look forward to providing the necessary laboratory tests and examinations requested by your veterinarians. Improved animal health is thus a group effort.

Respectfully submitted
W. D. Bolton, D.V.M., Professor
Animal Health Section
Department of Animal Sciences

September 13, 1982

Report of the Laboratory Division

Robert N. Mullen, *Director*
Personnel

<i>Chief Agricultural Chemist</i>	— Rudolph L. Polli
<i>Chemist</i>	— John Jaworski (Started 10/81—Temporary)
<i>Animal Health Lab. Supervisor</i>	— Richard Stewart
<i>Laboratory Technicians</i>	— Romeo Cyr Anita Fernandez Judith Day (Terminated 5/81) Laurie Justis (Terminated 3/31) John Santorello (Started 4/31) Victoria Jamieson (Started 2/82)
<i>Laboratory Assistant</i>	— Dorothy Clark (Promoted to Laboratory Assistant)

The Central Dairy Testing Laboratory, The Brucellosis Laboratory, and the Meat Inspection Laboratory were joined to create the Central Testing Laboratory on March 1, 1978. The Pesticide Analysis Laboratory became functional in April of 1979.

The primary objective of the Laboratory Division is to provide laboratory capability necessary to enable the Vermont Department of Agriculture to meet the following objectives: (1) protect the public from health hazards resulting from animal disease, (2) protect the public health from hazards resulting from the misuse of pesticides, (3) protect the public health from hazards resulting from unsanitary conditions in food production, food processing, and food marketing, (4) improve the quality of agricultural products, (5) offer services to farmers, consumers of agricultural products, (6) protect the public from fraud in the marketplace, (7) protect the farmer from certain extraordinary economic losses, and (8) convince the public that Vermont agricultural products are of superior quality.

The laboratory is divided into four (4) major program areas which are as follows:

1. *Livestock Laboratory*—Responsible for analyzing blood serum and milk for brucellosis and blood samples for pullorum-typhoid and mycoplasma. These results are reported to the Livestock Division.

	1981	1982
Milk Ring Tests	38,526	35,707
Blood Tests (<i>Includes cattle, swine and goats</i>)	66,908	60,818
Poultry Testing—		
Pullorum Typhoid	10,373	3,501
Mycoplasma Gallisepticum	1,803	1,107
Mycoplasma Synovia	1,383	600
Parasite Samples	15	18
Samples prepared for testing in other labs	212	153

This laboratory is also responsible for issuing supplies to state and federal inspectors, veterinarians, slaughter plants, commission sales, and auctions. Brucella vaccine and tuberculin are issued to veterinarians only.

2. Dairy Products Laboratory (Central Dairy Testing Laboratory)—This section has the responsibility of analyzing dairy products sold within the state on a monthly basis for the Dairy Division, to ensure that they meet the state and U.S. Food and Drug Administration minimum standards. This laboratory also analyzes all farm water supplies used for the cleaning and sanitizing of milking equipment.

The dairy laboratory also places high priority on all consumer, producer, industry, other state agencies, and the Extension Service requests for assistance on problem solving as it relates to the production of quality dairy products.

Numerous test procedures are used, the most important being butterfat, bacteria counts, coliform counts, phosphatase, antibiotics, added water and flavor.

The total of tests run for the biennial period is as follows:

	1981	1982
Tests on Fluid Dairy Products	31,916	34,423
Tests on Frozen Desserts	5,365	5,157
Water Analyses	1,961	1,738

A small but continuous, commercial analysis program has been in existence for years to counteract the shortage of commercial laboratories in the state. This work is done on a fee basis.

3. Meat Inspection Laboratory—This laboratory provides services to the Livestock Division, consumers, and the meat industry. Its legal mandate is to ensure that meat and meat products are wholesome and unadulterated, as well as in compliance with state and federal legislation.

Meat samples and processed meat products submitted by meat inspectors, retail inspectors, State Purchasing Division, consumers and law enforcement agencies are analyzed. The product to be analyzed dictates the specific tests to be performed and some of the common tests are fat content, added water, protein, salt, nitrites, soy flour, and non-fat dried milk.

The meat industry also avails itself of services offered by the meat laboratory to ensure their compliance with the results and regulations and that their products are correctly formulated and wholesome.

Meat analysis requires slow and very precise analytical procedures.

	1981	1982
Meat Samples Analyzed	200	165

4. Pesticide Analysis Laboratory—The pesticide laboratory was created to monitor pesticide formulations sold at the retail level, monitor pesticide applicators and their products, and to check pesticide residue concentrations in areas which have been or may have been treated. These services are performed for the Plant Industry Division to ensure the safety of the public from the misuse of pesticides.

The greatly increased sensitivity and versatility of the analytical instrumentation in the new pesticide laboratory will greatly improve the services provided by the Laboratory Division to the Vermont Department of Agriculture, the agricultural community, and the consumer.

For this biennial period, the following analyses were performed:

	1981	1982
Active Ingredients	167	179

Another function of the Laboratory Division, which has proved very successful, has been the training of other federal, state and industry analysts. This new program has improved mutual cooperation and uniformity of testing for the benefit of all, especially Vermont, an exporting state.

Each major section of the laboratory has participated, at least annually, in national proficiency testing programs. Each section is also approved by its federal counterpart to do the official analysis for the interstate shipment of animals, dairy products, meats, and to control the use of pesticides. During this biennial report period, the chief agricultural chemist has participated in three collaborative studies relating to pesticide analysis, and the analysts in the dairy product sections participated in three collaborative studies relating to antibiotic and/or inhibitor analysis. Collaborative studies are essential for the approval of new official analytical methods.

Report of the Plant Industry Division

Philip R. Benedict, *Director*

Personnel

Apiary Inspector, Richard Brigham 5/19/80-9/30/80,
5/11/81-9/25/81, 5/5/82-6/30/82
Apiculturist, Richard Druchas
Entomologist, Jon Turmel
Legal Interns, Scott Cameron 3/17/80-8/30/80 and
Robert Case 5/18/81-8/21/81
Pesticide Certification & Investigation Specialist, David
Hafner
Plant Industry Agent A, Kenneth Atwood
Plant Industry Agent B, Richard Jensen
Plant Pathologist, Steven Justis
Stenographer C, Catherine Rand
Temporary Pesticide Inspectors, Steve Bouchard
6/30/80-8/29/80 and Joel Davidson 5/25/82-
6/30/82
Typist B, Lucille Lovely
Typist C, Madeline Valentine

Our pesticide regulations, Vermont Regulations for Control of Pesticides, became effective on July 14, 1980.

We developed a program to allow the exportation of artificially propagated (cultivated) ginseng by Vermont growers. Under this system, the Department certified the production of 437 pounds (dry) of ginseng in 1981.

In October, 1980, the Department initiated a new program to recognize two employees a year who are deserving of an award for outstanding service, job dedication, loyalty, respect for and ability to work harmoniously with

fellow workers, efficiency suggestions, etc. In December, 1981, Madeline Valentine received one of the awards.

Pesticide Control

The pesticide control program is supported by two federal grants. Both grants are awarded annually.

The certification grant deals with the certification and licensing of pesticide applicators and dealers. This grant has been awarded annually since 1977. Written exams are required to obtain an applicator's certificate or a dealer's license. Recertification or continuing education is the second phase of initial certification. Recertification is the means by which certified applicators can obtain credit to reinstate their certificates. Credit can be obtained through re-examination or attendance at a Department of Agriculture approved recertification meeting.

The following number of individuals are certified or licensed under the certification program:

Private applicators	2,563
Commercial applicators	508
Class "A" dealers	121
Class "B" dealers	232
Class "C" dealers	1,476

Vermont has issued 94 company licenses to companies which apply pesticides on a commercial basis. The following table summarizes the restricted use pesticides sold in Vermont as reported by dealers and pesticides used in the state as reported by commercial applicators.

Summary of Class "A" Pesticides Sold by Vermont Dealers During the Calendar Years of 1980 and 1981

Compound	Actual Amount in Pounds			Actual Amount in Pounds	
	1980	1981		1980	1981
Aldicarb (<i>Temik</i>)	548.5	386.5	Fenvalerate (<i>Pydrin</i>)	---	4.8
Azinphosmethyl (<i>Guthion</i>)	5,183.75	5,803.75	Fonofos (<i>Dyfonate</i>)	2,530	3,380
Cadmium	188.049	2.9	Lindane	20.05	36.86
Carbofuran (<i>Furadan</i>)	13,741	20,406	Mercury	14.531	14.352
Chlordane	184	6	(<i>Mesuroh</i>)	2.25	12.46
Chlorpyrifos (<i>Dursban</i>)	46	4	Methomyl (<i>Lannate-Nudrin</i>)	993.6	869.4
Crotoxyphos (<i>Ciodrin</i>)	24.49	40.8675	Oxamyl (<i>Vydate</i>)	432	1,326
Cycloheximide	6.376	2.1556	Paraquat	354	286
DDVP (<i>Vapona</i>)	10.037	31.085	Parathion	10	32
Demeton (<i>Systox</i>)	414	114	PCP	178	102
Diazinon	118.1	46.71	Terbufos (<i>Counter</i>)	9	99.75
Dinoseb (<i>Remerge-Dow General</i>)	1,972	1,791	Toxaphene	---	186.2
Disulfoton (<i>Di-syston</i>)	140	---	(<i>Vapam</i>)	93	110.72
Endosulfan (<i>Thiodan</i>)	2,167.5	2,185	Vorlex	210	2,800
Ethoprop (<i>MOCAP</i>)	383.8	---	Zinc Phosphide	---	5.0
Fenthion (<i>Baytex</i>)	20	8			

Summary of Commercial Applicators' Annual Pesticide Reports

	1980	1981		1980	1981
	Pounds Actual			Pounds Actual	
Acephate (<i>Orthene</i>)	71.25	150.32	Glyphosate (<i>Round-up</i>)	767.16	2,337.68
Alachlor (<i>Lasso</i>)	33,735	43,489	Hexazinone (<i>Velpar</i>)	---	24
Aldrin	---	2.39	Iprodione	410.125	242.7
Ametryn (<i>Evik</i>)	296	328.	Lindane	32.36	68.23
Aminopyridine (<i>Avitrol</i>)	.06	.002	Linuron (<i>Lorox</i>)	50	75.16
Amitrole (<i>Amitrole</i>)	---	---	Malathion	1,124.57	1,440.60
Ammonium sulfamate (<i>Ammate</i>)	---	1,472.63	Maneb	138.4	248.8
Atrazine	101,784.05	106,713.87	(<i>Manzate 200--Fore</i>)	64.4	43.2
Azinphosmethyl (<i>Guthion</i>)	3,524.75	3,003.65	MCPP	340.09	366.88
Bendiocarb (<i>Ficam</i>)	65.119	94.16	Mercury Compounds	11.43	9.22
Benefin (<i>Balan</i>)	10.5	---	(<i>Metasystox-R</i>)	16	16.42
Benomyl	1,057.85	193.702	Methomyl (<i>Lannate</i>)	172.8	637.88
Bensulide	392.64	645.62	Methoprene (<i>Altosid</i>)	---	---
Brodifacoum (<i>Talon</i>)	.014	.02	Methoxychlor	2,982	2,734.25
Bromacil (<i>Bromacil, Hyvar</i>)	2,486	1,705	Methyl Bromide	16.92	133.8
Butylate (<i>Sutan</i>)	11,996.35	12,582.6	Metolachlor (<i>Dual</i>)	9,910	20,847.75
Cadmium	130.56	113.94	Metribuzin (<i>Sencor</i>)	35.25	---
Captan	16,333.8	19,525.52	Monuron (<i>Urox</i>)	247.72	---
Carbaryl (<i>Sevin</i>)	4,150.55	3,203.67	MSMA	---	37.5
Carbofuran (<i>Furadan</i>)	---	102	Naled (<i>Dibrom</i>)	45.167	20
Chlordane	560.5	124.4	Napropamide (<i>Devrinol</i>)	4	2
Chloroneb	396.9	387.36	Paraquat	116	104
Chlorophacinone (<i>RoZol</i>)	.482	.402	Parathion	52.98	30
Chlorothalonil (<i>Bravo, Daconil</i>)	1,266.85	1,231.01	PCNB (<i>Teraclor</i>)	1,251	1,887.65
Chloroxuron (<i>Tenoran</i>)	6.	4.	PCP	55	133.93
Chlorpyrifos (<i>Dursban</i>)	364.37	557.13	Pendimethalin (<i>Prowl</i>)	116	276
Chromium	---	.94	Phosalone (<i>Zolone</i>)	---	---
Copper Sulfate	5,989.5	3,668.35	Phosmet (<i>Imidan</i>)	3,533.25	3,821.6
Creosote	---	8,266.68	Picloram (<i>Tordon</i>)	811.00	932.56
Cyanazine (<i>Bladex</i>)	38,835	28,781.8	Pival	.0533	.02
Cyclohexamide	7.45	6.67	(<i>Polyram</i>)	2,812.8	294
Cyhexalin (<i>Plictran</i>)	150.5	64.5	Profluralin (<i>Tolban</i>)	60	68
Dacthal (<i>DPCA</i>)	20.375	18.25	Prometon (<i>Atritol, Pramitol</i>)	543.75	284.77
Dalapon (<i>Dowpon M</i>)	148	356	Propargite (<i>Omite</i>)	3	---
DDVP (<i>Vapona</i>)	14.99	6.99	Propoxur (<i>Baygon</i>)	31.115	45.85
Demeton (<i>Systox</i>)	189.00	91.875	Ronnel	3	---
Diazinon	756.34	370.72	Rotenone	27.88	.25
Dicamba	560.69	1,371.68	Siduron	17.92	111.54
Dichlobenil (<i>Casoron</i>)	54	28	Simazine (<i>Princep</i>)	1,438.58	2,932.2
Dichlone (<i>Phygon</i>)	2,698.63	2,612	Sodium Fluoride	5,941.94	9,054.41
Dicofol (<i>Kelthane</i>)	20.39	62.16	Tebuthiuron (<i>Spike</i>)	---	960
Dimethoate (<i>Cygon</i>)	2.0	1.25	Thiophanate	259.65	272.13
Dinoseb (<i>Premerge</i>)	---	---	Thiram	1,374.92	1,040.68
Diphacinone (<i>Ramiks, Promar</i>)	.01	.1759	Thichlorfon (<i>Proxol, Dylox</i>)	28.8	232
Diquat	.28	16.6	Triclopyr (<i>Garlon</i>)	1,398.69	888
Disulfoton (<i>Di-syston</i>)	11.25	37.35	Trifluralin (<i>Treflan</i>)	11.5	4
Diuron	7,708	6,034.6	(<i>Vapam</i>)	---	231.63
Dodine (<i>Cyprex</i>)	---	955.5	(<i>Vorlex</i>)	420	210
Dyrene	439.07	158.75	Warfarin	.35	.29
Endosulfan (<i>Thiodan</i>)	18	21.75	Zinc Phosphide	223.85	213.7
EPTC (<i>Eptam</i>)	1,806	2,292.5	Zineb	27.75	53.82
Ethion	.6	---	2,4-D	4,498.23	6,533.25
Ethoprop (<i>Mocap</i>)	7.55	107.5	2,4-DB (<i>Butyrac</i>)	164	158.97
Ethylene Dibromide	60.41	---	2,4,5-TP (<i>Silvex</i>)	---	---
Fosamine (<i>Krenite</i>)	1,008	4,290			

The second grant is the enforcement grant. This program was initiated in 1979 with the aid of federal funds, which enables the Department to enforce state and federal pesticide laws and regulations. Under this program, investigations are conducted to assure proper use of pesticides. In addition, all complaints or concerns are investigated to determine if violations have occurred and appropriate action is taken accordingly.

Other activities conducted under this grant involve inspections of retail, wholesale, and producer establishments handling pesticides. We also conduct U.S. Customs port visits to keep the Customs officials informed of federal requirements regarding pesticide imports.

In conjunction with the investigations and inspections, physical samples are collected and analyzed in the Department's pesticide laboratory which was developed and is implemented under this grant. The physical samples consist of pesticide formulations, dilutions, and residue (water, soil, vegetation) samples. Samples are analyzed for product quality and the residue samples are analyzed to determine the presence of pesticides. This grant enabled the Department to purchase the necessary analytical equipment for pesticide analysis.

In conjunction with these two grants, the Department has initiated development of hazardous waste regulations during this biennium. These regulations will regulate disposal of pesticides in Vermont. The Department has been working with the regulated community in developing a system to treat unwanted pesticide dilutions.

Pesticide Registration

Pesticides sold in Vermont are registered annually for the period December 1 through November 30 inclusive. Division activities include inspection of retail outlets to assure products offered for sale are registered with the U.S. EPA and the Vermont Department of Agriculture as required. Registrations issued are as follows:

	1981	1982
Companies	447	461
Products	3,410	3,964

STATE OF VERMONT

Department of Agriculture/Department of Forests, Parks & Recreation Joint Quarantine No. 1

WHEREAS, Scleroderris canker, (*Gremmeniella abietina*), a threatening and injuring disease in any stage of development, is established in portions of the State of Vermont and there is danger of ... introduction into other sections of the state; and

WHEREAS, several other states are contemplating external quarantines prohibiting the shipment of plants or plant parts of the genus *Pinus* from the State of Vermont, which would be detrimental to our nursery, forest products, and Christmas tree industry;

NOW, THEREFORE, I, George M. Dunsmore, as Commissioner of Agriculture, and I, Leo C. Laferriere, Commissioner of Forests, Parks and Recreation of the

At the time of store inspections, 144 stop sale orders were issued for improper materials in 1981, and 150 stop sale orders were issued in 1982.

Scleroderris Canker Quarantine

Major revisions in the state's Scleroderris canker quarantine were made during this biennium. Based on research findings, spruce (*Picea*), Douglas fir (*Pseudotsuga*), and larch (*Larix*) were removed from the list of quarantined materials. Studies indicated that little risk of further dissemination of the fungus *Gremmeniella abietina* was presented by unregulated movement of those species. Pine (*Pinus*) remains as the only regulated plant genus.

These actions were considered necessary since maintenance of the quarantine created a substantial burden on existing regulatory capabilities. Withdrawal of most of the federal involvement through the U.S.D.A. and the agency's action to remove the federal emergency regulation required an immediate reduction of the state's program. Such reductions in the state program were not considered to have detrimental impact on production or marketing of affected plant products.

Three plantations were quarantined in 1980 due to presence of the regulated disease in or near the production area. Each area was released in 1981 as a result of negative surveys or changes in the quarantine procedure.

Other important changes in the quarantine included: removal of the need for strain determination of the pathogen; authority to establish premise quarantines for new infestations; and a means of providing for deregulation of previously infested areas.

In early 1982, the State of Michigan proposed an exterior quarantine on Scleroderris canker as a result of the federal government's action to withdraw from the quarantine. Such actions were also taken against New York and New Hampshire. This proposal was vigorously opposed as a restraint of trade, setting an undesirable precedent for interstate plant movement regulations. During this biennium, the external quarantine was not known to have been implemented.

State of Vermont, under authority conferred by 6 V.S.A. Chapter 83, Sections 982 and 983, do hereby designate those portions of the State of Vermont, hereinafter described quarantined areas, and do hereby forbid the movement intrastate and interstate of the following articles from the regulated areas to points outside such areas unless accompanied by a certificate or permit issued as described by regulation.

Quarantine Regulations

Section	Section
I Definitions	III Regulated articles
II Quarantined area	

- IV Conditions governing the issuance of certificates and permits
- V Inspection and disposition of shipments
- VI Marking requirements

- VII Shipments for experimental and scientific purposes
- VIII Statement of origin of regulated articles

Section I: Definitions. For the purpose of these regulations, the following words, names, and terms shall be construed, respectively to mean:

(a) Scleroderris canker. The disease known as Scleroderris canker, caused by the fungus *Gremmeniella abietina* (Lagerb.) Morelet (*Scleroderris lagerbergii* Gremmen) in any stage of development.

(b) Infection. Refers to the presence of Scleroderris canker

(c) Inspector. An inspector of the Vermont State Department of Agriculture, Vermont State Department of Forests, Parks, and Recreation, or of the United States Department of Agriculture, when authorized by the Commissioner to act in that capacity.

(d) Moved, movement. Shipped, offered for shipment to a common carrier, received for transportation or transported by a common carrier, carried, transported, moved, or allowed to be moved from the quarantined area into or through any other portions of the State.

(e) Certificate. A valid form certifying the eligibility of products for movement outside of the quarantined area under the requirements of these regulations.

(f) Limited permit. A valid form authorizing the movement of regulated articles from a quarantined area to a specified destination for specific processing, handling, or utilization.

(g) Commissioner. The Commissioner of Agriculture and the Commissioner of Forests, Parks, and Recreation of the State of Vermont.

(h) Deregulation, deregulated. The removal of quarantine restrictions from regulated articles or quarantined areas due to satisfactory control measures to arrest or eradicate the disease.

(i) Premise quarantine. A limited action taken by the Commissioner to immediately place under regulation any field, tree, or plantation found to be infected with Scleroderris canker.

Section II: Quarantined areas. The following counties or towns, or parts thereof, of the State of Vermont are declared to be quarantined areas:

- (a) The towns of:

ADDISON COUNTY

Ripton
Starksboro

CALEDONIA COUNTY

Burke
Danville
Hardwick
Lyndon
Newark
Peacham
St. Johnsbury

Sheffield
Stannard
Walden
Wheelock

CHITTENDEN COUNTY

Milton
Underhill

ESSEX COUNTY

Brighton
Maidstone

FRANKLIN COUNTY

Bakersfield
Enosburg
Montgomery

LAMOILLE COUNTY

Belvidere
Cambridge
Eden
Elmore
Hyde Park
Johnson
Morristown
Stowe
Waterville
Wolcott

ORANGE COUNTY

Orange
Washington
Williamstown

ORLEANS COUNTY

Albany
Barton
Craftsbury
Glover
Greensboro
Lowell
Troy
Westfield

WASHINGTON COUNTY

Barre
Berlin
Cabot
Calais
East Montpelier
Marshfield
Middlesex
Montpelier City
Moretown
Northfield
Plainfield
Waterbury
Woodbury
Worcester

(b) Upon discovery of new infections in unregulated towns, the Commissioner may issue written orders establishing premise quarantines for articles regulated by the quarantine.

Section III: Regulated articles.

(a) Prohibited movement. The movement in this State of Scleroderris canker in any stage of development, whether moved independent of or in connection with any other article, is prohibited, except as provided in Section IV hereof.

(b) Regulated movement. The following articles shall not be removed from a quarantined area except under a limited permit or unless accompanied by a certificate indicating freedom from infection:

- (1) Nursery stock, Christmas trees, wreaths, branches, twigs, or parts thereof except logs and pulpwood, of any species of *Pinus* which are grown in any forest, field, nursery, or greenhouse.
- (2) Any other commodity or article when found on inspection to be infected with Scleroderris canker in any of its stages.

Section IV: Conditions governing the issuance of certificates and permits.

(a) Certificates. Certificates may be issued by an inspector for the movement of regulated articles under one or more of the following conditions:

- (1) When they have been inspected and found apparently free from infection;
- (2) When they have been treated or processed by methods approved by the Commissioner; or
- (3) When they have been grown, produced, manufactured, stored or handled in such a manner that, in the judgment of the inspector, they have not been exposed to infection or if no infection would be transmitted by the shipment thereof: provided that subsequent to certification the regulated articles will be loaded, handled, and shipped under such protection and safeguards against re-infection as are required by the inspector.

(b) Limited permits. Limited permits may be issued for the movement of non-certified regulated articles to specified destinations for specified processing, handling, or utilization. Persons shipping, transporting, or receiving such articles may be required to enter into written dealer-carrier agreements to maintain such sanitation safeguards against the establishment and spread of infection and to comply with such conditions as to the maintenance of identity, handling, processing, or subsequent movement of regulated products as may be required by the inspector. Failure to comply with conditions of the agreement will result in its cancellation.

(c) Cancellation of certificates or limited permits. Certificates or limited permits issued under these regulations may be withdrawn or cancelled by the inspector and further certification refused whenever in his judgment the further use of such certificates or permits might result in the dissemination of infection.

(d) Removal of quarantine restrictions. Upon completion of control measures found to be acceptable to the Commissioner, certain items or areas may be deregulated by the Commissioner.



Inspecting spring wheat for certified seed in Addison County

Such deregulation shall be based on the absence of Scleroderris canker from the articles or areas, and the reduced probability that movement of materials will constitute further dissemination of the disease.

Section V: Inspection and disposition of shipments. Any car or other conveyance, any package or other container, and any article to be moved, which is moving or which has been moved from the quarantined area, which contains, or which the inspector has probable cause to believe may contain infection, or articles regulated under this quarantine, may be examined by an inspector at any time or place. When articles are found to be moving or to have been moved in violation of these regulations, the inspector may take such action as he deems necessary to eliminate the danger of dissemination of infection.

Section VI: Marking requirements. Every container of regulated articles intended for movement from the quarantined area shall be plainly marked with the name and address of the consignor and the name and address of the consignee, when offered for shipment, and shall have securely attached to the outside thereof a valid certificate or limited permit issued in compliance with these regulations: provided, that (1) One certificate may be attached to one of the containers and another to the waybill; and for carlot freight or express shipment, either in containers or in bulk, a certificate need be attached to the waybill only and a placard to the outside of the car, showing the number of the certificate accompanying the waybill; (2) For movement by road vehicle, the certificate shall accompany the vehicle and be surrendered to consignee upon delivery or shipment; (3) For movement of regulated material by personal vehicle, the certificate number shall appear on the bill of sale.

Section VII: Shipments for experimental and scientific purposes. Regulated articles may be moved from the quarantined area for experimental or scientific purposes, on such

conditions and under such safeguards as may be approved by the Commissioner. The container of articles so moved shall bear, securely attached to the outside thereof, a certificate showing compliance with such conditions.

Section VIII: Statement of origin of regulated articles. Every person selling, or delivering, or attempting to sell, or deliver or ship regulated articles as defined in Section III hereof, in this State, shall accompany each such load, bundle, package, or shipment of the same with a legible written statement of origin which shall contain the address of the lands on which such regulated articles were grown, obtained, or cut; the name and address of the consignor.

Tree Warden Program

The Plant Industry Division continued to emphasize the importance of the tree warden as an officer of the town. Through town tree wardens, the Division was able to provide technical assistance on Gypsy Moth Suppression, Dutch Elm Disease control, pest identification and management, and planning for effective community planting programs.

Gypsy moth, *Lymantria dispar*, continued to plague many Vermont communities during the biennium. This voraciously feeding caterpillar devoured tree foliage on 41,327 acres in 1980 and 48,979 acres in 1981. As a result of this defoliation, several communities, under the tree warden law, requested assistance for control strategies. In FY-81, several thousand acres of land were surveyed for gypsy moth defoliation, egg mass populations and parasite activities. The results were given to the communities who requested this information so they could decide whether or not to control this pest. In FY-81, three communities decided to control gypsy moth in their residential areas. A suppression project was established for Bellows Falls-Rockingham, Essex Junction, and Westminster. Aerial application of carbaryl and B.t. (*Bacillus thuringiensis*) was made to 526 acres of residential land. B.t. was applied to 207 acres.

As in FY-81, thousands of acres were surveyed in FY-82. As a result, suppression projects were again conducted in two communities. Bellows Falls-Rockingham and Westminster chose aerial applications of carbaryl insecticide to 253 acres of residential lands.

The objectives of the suppression projects during the biennium were:

1. to reduce the total insecticide uses and impacts in the environment and on human health;
2. to protect trees in high use, high value areas;
3. to reduce nuisance and health aspects of gypsy moth caterpillars through timely suppression;
4. to protect 80 percent of the foliage; and,
5. to use the proper control method so as not to hinder parasite and predator activity in a possible collapsing population.

As a result of pre- and post-spray surveys, all the above objectives were accomplished in both suppression projects during the biennium.

Gypsy moth parasite activity was again monitored during the biennium. Attempts to retrieve parasites from

This quarantine shall become effective October 30, 1981.

APPROVED AS TO FORM: George M. Dunsmore
Commissioner of
Agriculture

John Scott Cameron
Attorney General's Office

Leo C. Laferriere
Commissioner of Forests,
Parks, & Recreation

Richard A. Snelling
Governor of Vermont

previous releases were made, but to no avail. Establishment of released species has not yet been documented. Gypsy moth parasites commonly found during the biennium were: *Ooencyrtus kuwani*, an egg parasite; *Exorista larvarum* and *Apanteles melanoscelus*. Additional attempts to retrieve released parasites will continue. In addition to actual suppression projects, public informational meetings about the gypsy moth were presented to residents of Lake Dunmore, Leicester, Salisbury, Essex Junction, Bellows Falls and to several schools throughout Vermont. Daily inquiries about gypsy moth were also handled by this office.



Detection traps being used to monitor cabbage pest population in the Connecticut River Valley

Nursery Inspection Program

Vermont's nursery and greenhouse inspection program has four major goals:

1. to prevent the introduction or dissemination of injurious insects and diseases which could cause serious economic crop losses;

2. to provide technical assistance to producers in the areas of insect pest management, disease control, horticultural methods, and other more general areas;
3. to provide a certification program that allows plant producers to move their commodities in interstate and international commerce; and
4. to provide consumers assurance that plants bought will be free of injurious pests.

Nursery inspection certificates are issued on a calendar year basis. In 1980, 209 nurseries and greenhouses were certified to sell plant materials. These businesses represented approximately 350 acres of nursery stock, and 460,000 square feet of greenhouse plants. Two hundred and forty certificates were issued to nursery stock dealers. Fifty-four collected stock inspection certificates were issued in 1980 for 20,109 plants taken from the wild. Thirty-six state and eight federal phytosanitary certificates were issued during that year.

In 1981, 238 nurseries and greenhouses were inspected and certified. Nursery stock was produced on approximately 335 acres and greenhouse crop production involved 454,500 square feet under glass or plastic. Ninety-eight collected stock certificates were issued for 28,078 plants from the wild. The Department issued 37 phytosanitary certificates: 27 state and 10 federal.

All nursery stock sold, or offered for sale in Vermont must be state-inspected under Title 6 of the Vermont Statutes Annotated, Sections 1121-1128. Nursery stock, by definition, includes florist crops (except cut flowers) as well as woody or herbaceous plants.

In an effort to improve the quality of nursery stock offered for sale in Vermont, the Department began a more rigorous inspection program for plants grown in or imported into Vermont. The program is continuing to offer more technical assistance to growers and plant dealers. Accurate identification of pest problems, notification of suppliers shipping poor quality stock, condemnation of infested stock, and the development of Vermont's own quality wholesale plant production industry are major foci of the program.

During the biennium, Vermont's wholesale export of nursery plants continued to develop. Evergreens, fruit

trees, evergreen seedlings, and some floriculture crops were major export items.

Several pests of regulatory importance were detected on imported nursery stock during the biennium:

Phytophthora blight of rhododendron (*Phytophthora cactorium*) from Massachusetts.

Black vine weevil and Fletcher scale on *Taxus* (*Otiorynchus sulcatus* and *Lecanium fletcheri*) from Connecticut.

Black canker (*Phylospora obtusa*) on winter injured plants from various states.

Geranium blight (*Xanthomonas pelargonii*) on geraniums from western New York.

Geranium rust of geranium (*Puccinia pelargonii-zonalis*) on geraniums from undetermined source.

Crown gall (*Agrobacterium tumefaciens*) on flowering almond from Massachusetts.

Cucumber mosaic virus on gladiolus corms from a Massachusetts broker (mid-West produced).

Certain other pests or problems encountered in Vermont nurseries and greenhouses are included under the Pest Survey and Detection section.

Pest Survey and Detection

Statutory authority of the Commissioner of Agriculture to conduct pest surveys is found in 6 V.S.A. Chapter 83. As a part of this responsibility, the following detections or investigations were made:

Juniper twig blight (*Phomopsis juniperovora*) on several species of *Juniperus* and *Thuja* was detected in landscape and nursery situations.

Sclerotinia sclerotiorum was detected on nursery-grown peonies.

Potentilla rust (*Phragmidium* sp.) was identified as causing defoliation of potentilla in one nursery and scattered landscape sites.

Nectria and Eutypella cankers were noted on several nursery and landscape tree species throughout the State.

The pinewood nematode, *Bursaphelenchus lignicolu*, was detected in red pine in Milton in 1980. Approximately 100 trees in the area were infected.

Phomopsis twig blight (*P. vaccinii*) and Fusicoccum canker (*F. putrefaciens*) were cultured and identified on several cultivars of highbush blueberry.

Septoria helianthi was identified as causing a leaf spot on sunflower.

Black rot of crucifers (*Xanthomonas campestris*) caused widespread economic losses to cabbage, cauliflower, and broccoli in 1981. Laboratory bioassay of commercial seed indicated a need for grower treatment of seed with hot water to control seed-borne bacteria.



Perennials are among the crops included in the nursery inspection program

Black spot of crucifers (*Alternaria* spp.) was detected on broccoli and cabbage in 1982. This disease is also controlled by hot water treatment of seed.

Asparagus root and stem rot caused by *Fusarium oxysporum* f. *asparagi* was isolated from commercial asparagus fields throughout the State.

A non-parasitic disease of lettuce, lettuce tipburn, was noted in commercial production fields and greenhouses in 1982. The disease is considered to be nutrient and weather related. Studies of lettuce field rot problems were undertaken in the spring of 1982 to determine causal organisms and possible controls. A Section 18 (FIFRA) was applied for and granted by EPA for vinclozolin fungicide to be used in lettuce disease control trials during the 1982 season.

White pine blister rust (*Cronartium ribicola*) was observed in nursery and landscape plantings of white pine. Although no quantitative survey was undertaken, blister rust appears to be increasing throughout the State. Control of *Ribes* species, the alternate host of the fungus, is virtually non-existent at present.

A white oak suspected of being infected by the oak wilt fungus, *Ceratocystis fagacearum*, was sampled and cultured in the laboratory. Repeated sampling failed to reveal the fungus, however, and Vermont is believed to remain free of this disease problem.

Many other foliar and root rot problems occurred during the biennium on various crops. Frequent rainfalls and cloudy weather throughout much of the 1981 and 1982 growing seasons aggravated such problems.

Commercial Greenhouse Energy Seminars

In response to increasing fuel costs and the need for up-to-date technology in the areas of energy conservation and utilization, the Vermont Department of Agriculture co-sponsored with the Vermont State Energy Office and the Vermont Plantsmen's Association two commercial seminars. The first seminar, held in July, 1980, focused on the roles of solar energy and conservation in greenhouse production. In August, 1981, a second seminar was held, this time centered on conservation and efficient or alternate heating systems.

Conference on Small Grains in Vermont

In March, 1981, the Agriculture Department held an educational conference for growers interested in producing barley, oats, wheat, or other small grains in Vermont. Other topics included were feeding small grains to livestock and dairy animals, small grains as a cash or seed crop, and the need for grain drying, processing, and storage facilities in Vermont. The conference featured speakers from Canada, the University of Vermont, the Vermont Department of Agriculture, and New England grain industries.

Potato Variety Trials

Vermont joined Maine and New Hampshire's variety trial program in 1961. The goals of the program are

basically the same now as they were 20 years ago. Varieties grown in the trials are selected from the following categories:

1. Recently named and numbered varieties from various sections of the United States and Canada.
2. Standard varieties of accepted quality which serve as standard or check varieties.
3. Numbered seedlings from potato breeding programs.
4. Special purpose varieties.
5. Older varieties requiring new performance data or re-evaluation.

Varieties are selected each year based on characteristics which may make them suitable for particular uses in Vermont. Varieties are field tested at various locations in Vermont. Emphasis during the last few years has been to find early maturing varieties of suitable quality and to test varieties suitable for roadside market gardens.

The cooperative potato variety trials are now conducted in 12 states and Canada. Various other organizations, especially the University of Maine Agriculture Experiment Station, help make the trials successful.

In 1980 and 1981, trials were conducted jointly with the University of New Hampshire in Guildhall, Vermont. High yields were recorded in 1980 for Katahdin, Belchip, Denali, Campbell 13, and a numbered variety, BR5991-WV16. In 1981, Kennebec, Chippewa, Belchip, AF238-66, and B8086-3 were high yielders.

Ginseng Certification Program

Under the Convention on International Trade in Endangered Species (CITES), the U.S. Department of Interior requires that states provide documentation that certain species of plants and animals involved in international trade are not in danger of extinction. The Vermont Department of Agriculture developed a program to allow the exportation of artificially propagated (cultivated) ginseng (*Panax quinquefolius*) by Vermont growers. Under this system, the Department certified the production of 437 pounds (dry) of ginseng in 1981.

Insects

Phyllobius glaucus

This curculionid beetle was present in damaging numbers during this biennium. Heavy damage was recorded on crabapple, maple and shadbush in commercial nurseries.

Maple Seed Caterpillar—*Proteoteras aesculana*

This caterpillar mined the terminals of young sugar maple stock in commercial nurseries. Heavy damage was recorded in Grand Isle, Irasburg, and Essex Junction.

Fletcher Scale—*Lecanium fletcheri*

This scale was found on taxus imported from other states. Dieback of twigs and branches was severe.

Cottony Maple Scale—*Pulvinaria innumerabilis*

This was found in a commercial highbush blueberry operation. No damage was reported.

Japanese Beetle—*Popilla japonica*

Damage continued to plague many Vermont communities during the biennium. Adult feeding was recorded on a wide variety of hosts. Several lawns were devastated by larval feeding.

Birch Leafminer—*Fenusa pusilla*

Birch Leaf Skeletonizer—*Buccalatrix canadensisella*

Birch Leaf Folder—*Ancylis discigerana*

This birch defoliating complex caused severe browning and defoliation in white, gray and yellow birch throughout the State during the biennium. Chittenden and Essex counties were the worst hit by this complex.

Chinch Bug—*Blissus leucopterus*

This devastating insect of turfgrass was recorded in Washington, Chittenden and Windham counties. Many of these areas reported severe lawn losses.

Phymatodes testaceus

This cerambycid beetle was collected in a private home in Chittenden County. Large numbers were found infesting a cellar of this Burlington Complex.

Bamboo Powderpost Beetle—*Dinoderus minutus*

A foreign pest interception of this insect was made in Randolph, Vermont. This insect was found in "Japanese yo-yos." It was feared that these insects would reinfest any dry bamboo on the premises. Extermination was immediately ordered.

Nephoteryx sp.

This pyralid was collected from sugar maple in Grand Isle. Only slight defoliation was recorded.

Oncopsis variabilis—A leafhopper

This leafhopper was collected on sugar maple in Grand Isle. Heavy populations were found throughout the maple stand.

Cyartema ferriferanum—A leafroller

This leafroller was found throughout the Barre, Vermont, area and on hydrangea. Moderate damage occurred on these plants.

Lotus brunneus—Brown Powderpost Beetle

Another foreign pest introduction was found in a wooden mask from India. The mask was placed in a freezer for several months to kill these beetles.

Microphylellus tumidifrons—A plant bug

This plant bug was found feeding on Blue Spruce in a commercial nursery. Slight discoloration and distortion resulted.

Four-lined plant bug—*Poecilocapsus lineatus*

This plant bug caused severe damage to a wide range of ornamentals, herbs, and perennials throughout the State. Heavy damage was recorded by a commercial nursery in Orange County.

European Earwig—*Forficula auricularia*

Homeowner complaints and inquiries continued to increase over the biennium. This pest seems to be on the increase.

Arborvitae Leafminer—*Argyresthia thuella*

Unlike previous years, this miner was not as severe. Populations seemed to decrease throughout the state, except for Windham County.

Locust Leafminer—*Odontata dorsalis*

This insect caused considerable damage on locust in the Connecticut River Valley and in parts of Chittenden County.

Miscellaneous

Other popular homeowner inquiries included:

Northern Pine Sawyer	Carpenter Ants
White Pine Weevil	Carpet Beetles
Mountain Ash Sawfly	Larder Beetles
Satin Moth	Cabbage Maggot
Half-winged Geometer	Cabbage Worms
Forest Tent Caterpillar	Mexican Bean Beetle
Eastern Tent Caterpillar	Colorado Potato Beetle
Bronze Birch Borer	

Many others too numerous to name.



Vermonters produce and sell over half a million Christmas trees each year

Arthropod Control

As in previous years, inquiries about mosquito control and blackfly control continue to increase. Dairy farmers, beef producers and tourist-related industries, such as campgrounds, golf courses and recreational areas, are constantly struggling to keep these biting arthropods at sub-economic levels.

During the biennium, the Plant Industry Division continued to provide technical assistance to towns, compacts,

individuals and resorts on biting arthropod control. Mapping of breeding areas, population fluctuations, control measures and equipment were among the many services provided to interested parties.

One such group active in mosquito control is the Brandon, Leicester, Salisbury (BLS) Insect Control Compact. Assistance from the Department included technical advice at regular monthly meetings, monitoring population dynamics, control recommendations, speaking engagements to local town groups and organizations, obtaining necessary permits for control work, and applicator training and certification.

The BLS Insect Control Compact purchased ultra-low volume (ULV) equipment during the biennium and is now initiating a control program within this tri-town area. Surrounding towns are also considering joining this highly motivated and efficient group.

During the biennium, continued testing of a new biological control agent, *Bacillus thuringiensis* var. *israelensis* proved to be encouraging. Two different formulations were tested and an aerial application of one of these formulations showed that this product can be used effectively in the cold waters of Vermont. Large scale use of this B.t.i. is expected in the future for mosquito control.

In March of 1982, a Mosquito Control Seminar for Vermont communities was presented. People from towns, industry, government and resorts attended this day long seminar. Topics included:

Mosquitoes—Their Biology, Species and Occurrence;
Adulticiding for Mosquito Control;
B.t.i. and Blackfly Control;
Equipment for Mosquito Control;
Aquatic Vegetation Management; and
Rules and Regulations Concerning Mosquito Control.

This program was well received and requests for continuing this program on a yearly basis are being received by the Division.

Apiary Program

The main importance of beekeeping is in the pollination service the bees provide. Pollination, is the transfer of pollen on the reproductive part of the flower; this sets the seeds or fruit. Not enough bees or bad weather can lead to poor pollination and a poor yield of insect pollinated crops.

Agriculture in Vermont is becoming more diverse. Fruit and vegetable farming are becoming more popular, increasing the need for pollinating insects. Examples of how the use of honeybees can increase production of fruits can be seen in the following experiments:

BLUEBERRIES—Test plot with no bees produced 160 ounces. Test plot with two colonies produced 290 ounces.

RASPBERRIES—Without bees, 16 to 70 percent of the flowers produced berries. With bees, 64 to 98 percent of the flowers produced berries.

CANTALOUPE—With bees, 23 percent more melons and 8.8 percent heavier.

APPLES—A tree without bees produced 25 apples and a tree with bees produced over 1,200 apples.

Bees can also help increase the yields of cucumbers, squash, pumpkins, and strawberries.

To achieve maximum efficiency in agricultural production of certain crops, honeybees must be available. The apiary program is set up to maintain a viable beekeeping industry capable of supplying the pollination that is required. This is being done by controlling bee diseases, technical assistance, and promotion of apiculture and apicultural products.

Disease Control

During the 1981 calendar year, 703 apiaries containing a total of 4,129 hives were inspected. Forty-seven apiaries had a total of 130 hives with American Foulbrood disease (AFB). One hundred and eight of the diseased hives were incurable and had to be destroyed. Twenty-two mildly diseased hives were treated with the antibiotic "Terramycin" (oxytetracycline).

In 1982, 916 apiaries containing 5,006 hives were inspected. Fifty-two apiaries with a total of 166 hives had AFB. One hundred and forty-two hives were burned and 24 were treated. Seven beekeepers that had disease problems in 1981 had reoccurring problems in 1982. Eight of the hives that were treated in 1981 were burned in 1982.

Terramycin (T.M.) is generally used as a preventative, not a cure against AFB. T.M. is not effective in curing the AFB infected hive. This is because it does not destroy the AFB spores (resting stage). It does kill the vegetative stage (growing stage), giving the beekeeper the false impression that the disease is gone, but these treated, diseased hives can be reservoirs for the hard-shelled AFB spores. If these hives (spore carriers) are not properly handled, the AFB can be spread causing great losses in bees, honey, and pollination.

Beekeepers that wish to attempt to treat diseased hives with T.M., are allowed to do so only if: the colony is strong, there are only a few diseased larvae, and there is no chance of spreading the disease to other hives. All badly diseased hives are burned. Treated hives are re-inspected every year. If the disease reappears, the hive is destroyed. In most cases, the AFB does reappear in time and the hive is destroyed. Therefore, the apiary inspectors do not recommend treating diseased hives in most cases.

The Canadian ethylene oxide fumigation chamber was given an experimental trial in order to try saving some of Vermont's diseased bee equipment. Ethylene oxide fumigation is one of the few ways AFB spores can be killed. The equivalent of 300 hives were fumigated with ethylene oxide gas. Samples of fumigated diseased equipment were sent to Beltsville bee disease lab. It was determined the fumigation process was effective in killing 99.9 percent of the AFB spores. The Canadian chamber was not re-used in 1982 because of the cost and the lack of a large concentrated amount of diseased equipment.

European Foulbrood has not been a big problem in Vermont for years. One commercial beekeeper in Addison County did have an outbreak in 1981. He cleaned it up in a season by re-queening and treating with T.M.

Sacbrood and chalkbrood still remain to be minor diseases that do not generally weaken the colony. Reporting their incidence is not necessary.

Samples of bees have been sent and will continue to be sent to Beltsville to be checked for the presence of *acarapis woodii* and Varroa mites. These bee killing mites have not yet been found in the United States, but are expected to reach our borders by 1990.

Technical Assistance

Fifty-seven programs stressing good bee management were conducted in 1981 and approximately the same number were conducted in 1982. These programs were held for beekeeping clubs and other interested groups, such as FFA, 4-H, UVM Plant Club, Vermont Institute of Natural Science, Grange, and Learning Exchange. Other activities included radio and television talk shows, articles for the Vermont Beekeepers' Association newsletter, Speedy Bee and Agriview; and a video tape on wintering bees was produced and played around the State. The video tape proved to be an excellent educational tool. More tapes on bee management will be made in the future.

Promotion

Lower priced honey from foreign countries is keeping the honey prices down. This is making it harder and harder for the Vermont honey producer to keep up with inflation and stay out of the red. Promotion of locally produced honey helps keep the honey prices up. It is hoped that this type of promotion is being achieved through the Seal of Quality program. Honey standards for the Seal were drafted and passed by legislative action.

The endorsement from the Department of Agriculture attests to the products' quality. It also insures the consumers that they are buying a Vermont product, therefore supporting a local industry.

Other promotional efforts include a Vermont honey label for members of the Vermont Beekeepers' Association, and talks on beekeeping and honey that were given at county fairs and agricultural shows, the Grange, Rotary clubs, and elementary schools.

Wintering the Bees Over

Wintering the bees over has always been a problem in Vermont. Many hives were lost in the snowless winter of 1981. One commercial beekeeper in the Champlain Valley lost 100 out of 400 hives (25%). Twenty-five percent winter kill was high even for that year. Winter kill in 1981 was around ten percent (average kill in Vermont is about five percent).

The snowy winter of 1982 was a bit better. The Champlain Valley, which has most of the bees in the State, came through with a below average winter kill. Unfortunately, the beekeepers in the southern part of the State did not do as well. Because of a bad honey crop and a lack of a January thaw, many southern beekeepers suffered as high as a twenty-five percent winter kill.

To remedy this wintering problem, a beekeeper in Cornwall is trying the age-old method of wintering bees in a cellar. He has over-wintered 250 hives in a cellar for the last two winters. It will take a few more winters before any conclusions can be drawn about his wintering technique.

The Honey Crop

The 1981 honey was some of the nicest, lightest honey that has been seen for years. Clover, alfalfa, vetch, and birdsfoot trefoil were the great contributors to this crop. Many beekeepers in the northern half of the State boasted of 100 pound averages. A couple of beekeepers in the

Apiary Statistics

Counties	No. of Inspected Apiaries With One or More AFB Diseased Hives in the Last Eleven Years												Beekeepers That Had AFB (71-82)
	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	
Addison	8	9	9	3	10	14	11	2	6	10	14	3	41
Bennington	4	1	4	3	5	4	2	0	4	4	0	3	16
Caledonia	0	0	0	1	1	0	4	1	2	2	1	4	9
Chittenden	1	2	4	4	5	17	15	5	4	4	4	7	51
Franklin	1	3	0	2	1	4	6	8	6	6	3	4	23
Grand Isle	0	1	1	0	0	0	0	3	0	1	0	3	8
Lamoille	0	0	0	1	1	1	1	0	1	2	3	0	8
Orange	0	0	0	7	5	8	0	1	0	5	5	2	15
Orleans	0	2	3	2	4	0	3	1	0	1	0	3	10
Rutland	4	3	5	11	5	5	6	6	7	6	4	4	38
Washington	3	4	8	3	8	4	4	1	6	7	4	5	36
Windham	2	5	4	13	12	4	7	4	4	4	2	5	42
Windsor	2	4	4	8	7	4	5	3	1	0	7	6	34
Total Apiaries													Total
Diseased	25	34	42	58	64	65	65	42	41	51	47	52	339
Total Apiaries Inspected	127	191	270	304	528	937	1126	1106	759	637	703	916	We now have almost 1700 beekeepers in the State
% Diseased	20%	18%	15%	19%	12%	7%	6%	4%	5%	8%	7%	6%	

[Mostly trouble areas inspected raising the %]

Northeast Kingdom made over 250 pounds per hive of this very light honey. The southern part of Vermont made little honey with averages from 0 to 40 pounds. Total production in 1981 was about 500,000 pounds.

All in all, the 1982 honey crop must be considered a disappointment. However, there were some places that did make an average (50 pounds) to an above average (80-100 pounds) crop. The areas with the most rain had the most honey. Dummerston, just above Brattleboro, had a very

good crop of light honey. The Connecticut River Valley from the White River down, had a good to average surplus. The west side of the State was spotty. The Burlington-Shelburne area had an average flow, while the Rutland-Bennington area had mixed reports of average to poor flows. Addison and Franklin counties were depressed with reports of 0 to 40 pounds. Total production was about 250,000 pounds.

Weights and Measures and Retail Inspection

Trafford F. Brink, Director

Personnel

Steno C — Jean Kopach

Inspectors — Raymond Cioffi

Frank Burnp

Charles Lavery

Robert Howard

Frank Troyse

David Haynes

Ed Cox

Douglas Jones (Metrologist

retired 12/31/81)

John Santorello (3/30/81 transferred
to Dairy Division)

During the biennial period, retail inspection functions which had been performed by agricultural inspectors of three other divisions within the Department of Agriculture were assigned to this division. The name of the division was changed to Weights and Measures and Retail Inspection.

The additional regulatory services at retail outlets included maple products, eggs, potatoes, apples, milk, frozen food, Class C Pesticides and retail meat.

The responsibility for calibration of farm bulk milk tanks was transferred from the Weights and Measures and Retail Inspection to the Dairy Division.

Douglas Jones, Metrologist and training officer for this division, retired following 16 years service.

The implementation of the added regulatory functions, transfer, and reassignment of agricultural inspectors during this period has been a challenge to all members of our staff.

At the end of this reporting period, the number of division inspectors is the same as was employed before the retail inspection work was assigned. It is recommended that additional regulatory personnel be assigned to assure compliance is maintained.

During the past biennium, this division has worked closely with the Regulatory Service stopping loads of fertilizer so that they could be analyzed by the Vermont Experiment Station to insure that the correct analysis of the product as stated on the invoice is being delivered.

Measurement Center

We have been without a Metrologist as stated above, for several months, due to the retirement of Douglas Jones. Our new Metrologist Raymond Cioffi will be attending a two-week training school this fall so that we will be able to recertify our laboratory which will give us traceability to the international standards in Paris, France for length, mass and volume. The Metrologist will carry on a continuing education attending seminars annually.

Due to the installation of a sloping walk for the handicapped, we are now able to move 1,000 lbs. weights into the basement of the Agricultural Building.

Our Russell Balance, which is used to calibrate weights up to 2,500 pounds, has been moved from the Howe Scale Company and re-installed in our laboratory at 116 State Street.

Vermont will join the Northeastern Measurement Assurance Program as soon as our laboratory is recertified. This program is made up of metrologists and directors from the Northeastern States. The program covers laboratory administration, basic statistics, care and handling of mass standards, care and use of precision balances, and mass measurement procedures. This will help us perform laboratory work at a high level of accuracy.

Education

The Office of Weights and Measures of the National Bureau of Standards is writing educational programs on all weights and measures devices that will give interpretation of laws and regulations, as well as correct test procedures for each device, so that all inspectors will carry out their duties the same and the testing of all devices will be carried out the same. This home study course for inspectors will also be available to licensed scale mechanics on all phases of commercial weighing and measuring devices. They will go into great detail on microprocessing which is used in most all scales today which give a digital readout. The first of these courses will be available at the National Conference in July, 1983. The technology in scales is advancing so fast that it is necessary for the inspectors to take yearly courses, some of which are given by industry, so they can be assured of carrying out their duties in an accurate and time-saving manner.

During the last year a two-day course was attended by our personnel with instruction being given by members of The Institute of Weights and Measures.

Training Schools have been held for scoring potatoes and apples but much more training is needed on these two commodities.

Tri-State Training Schools were held each fall with Maine, New Hampshire and Vermont with a training officer from the National Bureau of Standards explaining all new changes in the laws, regulations and test procedures that are passed at the National Conference in July of each year. This is a very meaningful school and a great deal of benefit is acquired by all attendees. Industry is invited to these meetings which also brings them up-to-date as to changes in requirements which saves this division many return trips by not having to reject devices.

Several times a year inspectors meetings are held to discuss all problems that have arisen and come up with a solution so that we can have uniformity among inspectors who work in different areas of the state.

Motor Oils and Fuels

All vehicle tank meters and air eliminators were checked annually and after repair to insure accuracy for both dealer and consumer. Plant meters were checked twice a year due to the large volume of product being sold through these devices. All these meters were adjusted as near to zero as possible because of the high price of the product.

All gas pumps were checked annually to see that equity prevails between buyer and seller.

Many of the homes today are burning firewood. This office received complaints on short measure wood and when measured by this office we have found wood as short as 50% of what they were charged for. Many people do not take the time to stack their wood so that they do not know whether they have received the correct amount or not.

Coal is being used in much greater volume and the amount seems to be growing each year, with more concerns installing scales so that the product can be weighed. All of these scales are checked annually by this division.

There is a big increase in the sale of kerosene as new kerosene heaters are being sold to homes in increasing volume. Finding a suitable way of measuring this kerosene is a problem as only one concern makes a hand pump. A used gasoline pump costs from \$500.00 up plus installation, so many concerns feel they do not sell a large enough volume for this type of an installation.

Temperature Compensation

Temperature compensation is adjusting the product of motor fuels and heating oils to 60° Fahrenheit.

Our law allows product being sold at wholesale to be compensated but not at retail. It is expected that at the National Conference in July, 1983 they will vote to allow temperature compensation on January 1, 1984. At today's prices it will cost the consumer for heating oils on the average fill-up from \$2.00 to \$3.00 more.

The greatest volume of heating oil sold in Vermont is at a temperature under 60° Fahrenheit. If it is allowed in the State, it is the feeling of this division that it should be

allowed only with the device attached to the meter which will automatically compensate the product and will not allow it to be compensated with a thermometer.

All L.P. gas meters that deliver to homes in the State are temperature compensated.

Laws and Regulations Not Being Enforced

Due to the shortage of personnel there are many regulations and laws that cannot be enforced.

One of these is the checking of odometers on rental cars and trucks. We have the necessary equipment and it is hoped that some day we will be able to have the personnel to at least test these on a random basis.

Timing devices should be checked by this division. These include such things as timers on washers and dryers, car washes, etc. Because of the lack of personnel it is impossible for us to even consider carrying out this phase of our work.

There are many regulations that have been made part of our law that we are not able to check on to see if there is compliance or not. They include such things as the following: fence wire products, peat and moss, prefabricated utility buildings, roofing and roofing material, sealants, sod and turf, softwood lumber, carpeting, hardwood lumber, polyethylene products, insulation, machine vend- ed commodities and railroad car tare weights.

We are not able to enforce packaging and labeling regulations and there are many violations in the stores today. This office is glad to help anyone to make up a correct label or approve one that has previously been made up to insure their compliance with Food and Drug Administration and our regulations.

We are not able at this time, due to the lack of a facility, to calibrate the compartments in transports so that the person buying the product can check the seals to insure that he is receiving the amount that he is being charged for. This work was performed at the Texaco Bulk Plant in Burlington for many years, but since its closing we have been unable to find a facility to do this calibration.

Due to the fact that most all bulk plants in Vermont are closed, a large amount of heating and motor fuel products are being purchased out of state where we do not have any control over meters used in dispensing this product into the transports. Without seals in the compartment the driver of the transport has no way of knowing if he is receiving the correct amount from the meter. A facility to do this work would cost in the vicinity of \$30,000.00.

Although we have lights and sirens on our vehicles, due to the lack of manpower we do not have the time to carry out the surveillance that is needed.

Surveillance is a time consuming project so we are unable to stop loads of grain, coal, etc. for checking correct weights against the weigh slips that are given to the consignee. Oil trucks should be stopped at a greater frequency than is now done. Vehicle tank meters and L.P. gas meters should be checked to insure that the seals have not been broken.

General Inspection Work Performed During the Biennium

	Total Tested and Sealed First Test	Rejected On First Test	Adjusted	Condemned and Seized	Total Packages Checked	Correct	Light	Heavy
Small Scales	8,934	655	1,224	1				
Liquid and Linear Measure	456	13	2					
Weights	3,353	20		10				
Package Checking					31,183	23,727	5,078	2,378
Liquid Measuring Devices	6,897	1,320	27					
Track Scales	12	1	4					
Heavy Duty Scales	822	123	222					
Vehicle Meters	1,271	25	547					
Air Eliminators	1,145	30	3					
Plant Meters	69	2	15					
LP Gas Meters	283	22	218					

Retail Inspection Work Performed During the Biennium

	Total Tested	No. of Violations
Maple Syrup	805	196
Eggs	1,903	247
Potatoes	1,496	122
Apples	1,084	68
Strawberries	126	5
Retail Meat Inspection	2,258	290
Class C Pesticide	2,252	243
Dairy Products	2,399	9
Frozen Foods	1,880	5



Appropriations and Expenditures Fiscal Year 1981

	Adjusted Approp.	Expended	Balance		Adjusted Approp.	Expended	Balance
Administration				Meat/Poultry Inspection			
Personal Services	\$142,772	\$142,771	1	Personal Services	294,700	294,183	517
Operating Expenses	33,171	32,343	828	Operating Expenses	52,500	52,250	250
Receipts	(10,000)	(9,360)	(640)	Receipts	(192,600)	(191,889)	(711)
TOTALS	165,943	165,754	189	TOTALS	154,600	154,544	56
Livestock				Dairy Market Development			
Personal Services	237,030	213,280	23,750	Personal Services	17,350	17,120	230
Operating Expenses	31,400	31,317	83	Operating Expenses	4,900	4,657	243
Grants	92,551	25,068	67,483	Receipts	(10,200)	(9,750)	(450)
TOTALS	360,981	269,665	91,316	TOTALS	12,050	12,027	23

	Adjusted Approp.	Expended	Balance		Adjusted Approp.	Expended	Balance
Dairy				Weights & Measures & Retail Inspection			
Personal Services	181,600	175,271	6,329	Personal Services	154,000	153,992	8
Operating Expenses	53,334	50,020	3,314	Operating Expenses	49,500	49,387	113
Receipts	(13,000)	(12,744)	(256)	TOTALS	203,500	203,379	121
TOTALS	221,934	212,547	9,387	Agricultural Development			
Laboratories				Personal Services	146,600	134,552	12,048
Personal Services	126,370	126,323	47	Operating Expenses	58,500	50,163	8,337
Operating Expenses	15,100	14,112	988	Other	114,500	26,850	87,650
Receipts	(23,200)	(25,492)	2,292	Receipts	(126,000)	(36,587)	(89,413)
TOTALS	118,270	114,943	3,327	TOTALS	193,600	174,978	18,622
Plant Industry				Stipend Fund	100,000	95,511	4,489
Personal Services	164,392	164,091	301				
Operating Expenses	66,360	53,852	12,508				
Receipts	(67,832)	(56,920)	(10,912)				
TOTALS	162,920	161,023	1,897				

	Balance Forward and Receipts	Expended	Balance		Balance Forward and Receipts	Expended	Balance
Special Funds				Special Funds			
Agriview Publication	\$ 27,419	\$ 13,165	\$ 14,254	Shade Tree Preservation	1,077	1,033	44
Livestock Supervisory Services	269	228	41	Pesticide Enforcement '79—Federal	8,147	3,014	5,133
Meat Inspection—Federal	210,345	192,000	18,345	Pesticide Enforcement '80—Federal	34,583	34,583	-0-
Federal—State Inspection of Dairy Products	9,828	5,727	4,101	Pesticide Enforcement '81—Federal	29,877	19,250	10,627
State Dairy Council	98,641	81,886	16,755	Pesticide Disposal	728	99	629
Vermont Dairy Industry Council	343,048	343,048	-0-	Federal Egg Inspection	49,061	29,257	19,804
Milk Testing	5,417	541	4,876	Market Improvement— Small Fruits	4,081	2,736	1,345
Dairy Herd Replace- ments—Federal	5,588	3,950	1,638	Vermont Products Identification	1,632	1,347	285
Marketing Dairy Replacements	14,284	--	14,284	Vermont Farm Festival	970	970	-0-
Certification of Com- mercial and Private Pesticide Applicators	18,085	15,241	2,844	Eastern States Exposition	11,077	750	10,327
Certification of Pesticide Applicators—Federal	170	105	65	Market Information and Price Reporting	3,500	2,007	1,493
				Vermont Subterminal Market	7,598	--	7,598



Appropriations and Expenditures Fiscal Year 1982

	Adjusted				Balance			
	Approp.	Expended	Balance	Special Funds	Balance	Expended	Balance	
				Forward	and Receipts			
Administration								
Personal Services	\$173,699	\$173,356	343	Agriview Publication	\$ 24,814	\$ 11,280	\$ 13,534	
Operating Expenses	41,100	41,017	83	Livestock Supervisory				
Receipts	(10,000)	(9,730)	(270)	Services	41	41	-0-	
TOTALS	204,799	204,643	156	Meat Inspection—Federal	233,715	229,400	4,315	
Livestock				Dairy Markets				
Personal Services	265,319	262,233	3,086	Development	2,500	2,500	-0-	
Operating Expenses	43,500	42,993	507	Federal—State Inspection				
Grants	52,483	42,438	10,045	of Dairy Products	8,928	4,764	4,164	
TOTALS	361,302	347,664	13,638	State Dairy Council	234,687	217,672	17,015	
Meat/Poultry Inspection				Vermont Dairy Industry				
Personal Services	333,977	329,680	4,297	Council	1,641,162	1,641,162	-0-	
Operating Expenses	56,200	55,597	603	Milk Testing	14,275	--	14,275	
Receipts	(229,400)	(229,400)	--	Dairy Herd Replace-				
TOTALS	160,777	155,877	4,900	ments—Federal	1,638	1,638	-0-	
Dairy Market Development				Marketing Dairy				
Personal Services	22,271	22,103	168	Replacement—Federal	14,284	14,284	-0-	
Operating Expenses	4,800	4,725	75	Pesticide Enforcement				
Receipts	(12,250)	(12,250)	--	'81—Federal	42,721	39,139	3,582	
TOTALS	14,821	14,578	243	Pesticide Enforcement				
Dairy				'82—Federal	48,344	27,622	20,722	
Personal Services	221,030	220,992	38	Pesticide Certification				
Operating Expenses	63,000	62,981	19	'81—Federal	9,733	4,779	4,954	
Receipts	(10,266)	(13,953)	3,687	Pesticide Certification				
TOTALS	273,764	270,020	3,744	'82—Federal	13,951	5,302	8,649	
Laboratories				Shade Tree Preservation	351	351	-0-	
Personal Services	146,820	146,764	56	Market Improvement—				
Operating Expenses	24,400	23,784	616	Small Fruits	1,345	1,345	-0-	
Receipts	(26,200)	(36,141)	9,941	Pesticide Disposal	629	629	-0-	
TOTALS	145,020	134,407	10,613	Federal Egg Inspection	36,149	17,250	18,899	
Plant Industry				Vermont Products				
Personal Services	197,886	197,049	837	Identification	1,219	--	1,219	
Operating Expenses	52,600	52,436	164	Eastern States Exposition	10,327	--	10,327	
Receipts	(42,100)	(41,660)	(440)	Agricultural Development	45,000	45,000	-0-	
TOTALS	208,386	207,825	561	Vermont Subterminal				
Weights & Measures & Retail Inspection				Market	15,196	11,522	3,674	
Personal Services	192,763	164,880	27,883	VSBA—Sheep Project	12,000	9,500	2,500	
Operating Expenses	75,200	65,533	9,667	Federal—Market Informa-				
Receipts	(45,800)	(17,250)	(28,550)	tion and Price Reporting	1,493	1,493	-0-	
TOTALS	222,163	213,163	9,000					
Agricultural Development								
Personal Services	157,698	152,043	5,655					
Operating Expenses	63,034	59,102	3,932					
Other	94,000	74,182	19,818					
Receipts	(104,534)	(75,549)	(28,985)					
TOTALS	210,198	209,778	420					
Stipend Fund	100,000	90,000	10,000					

Special Funds Receipts

General Fund Receipts				Special Fund Receipts			
		1981	1982			1981	1982
Program	Receipt Account	Receipts	Receipts	Program	Receipt Account	Receipts	Receipts
	Sales of Service	1,027	927		Sales of Surplus Property	113	4,846
	Sales	185	161		Agriview Publication	10,877	10,560
				Meat			
Livestock	Livestock Dealers Licenses	3,102	1,865	Inspection	Federal Meat Inspection	194,107	215,369
	Swine Garbage Licenses	16	20				
	Animal Welfare Licenses	350	340	Dairy	State Dairy Council Taxes	75,020	213,827
	Livestock Branding	10	-0-		Vermont Dairy Industry Council	307,721	1,641,162
Meat					Milk Control Board Licenses	4,208	4,104
Inspection	Meat Handlers Licenses	6,264	6,337		Inspection of Dairy Products—Federal	6,691	4,828
					Deary Brothers Bond		300,000
Dairy	Milk Handlers Licenses	2,277	2,450				
	Milk and Cream Testers Licenses	2,190	1,599				
	Oleomargarine Licenses	17,562	12,317	Dairy			
	Warehouse Licenses	180	180	Market			
	Frozen Dessert Licenses	3,927	3,723	Development	Dairy Market Development	-0-	2,500
	Imitation Dairy Products Handlers Licenses	75	407				
				Plant	Federal Pesticide Certification '82	-0-	6,316
Laboratories	Laboratory Fees	1,078	-0-	Industry	Federal Certification of Commercial/Private Pesticide Applicators '81	22,864	-0-
					Pesticide Enforcement '79—Federal	1,471	-0-
Plant	Pesticide Registrations	31,350	33,675		Pesticide Enforcement '80—Federal	38,905	-0-
Industry	Pesticide Dealers & Applicators Licenses & Certificates	12,410	12,806		Pesticide Enforcement '81—Federal	25,555	35,985
					Pesticide Enforcement '82—Federal	-0-	44,452
Weights & Measures	Dealers and Repairmen's Licenses	2,022	1,950				
	Weighmasters Licenses	1,376	1,136	Laboratories	Milk Testing	2,437	8,860
Agricultural	Egg Buyers Licenses	58	54				
Development	Fees—Bureau of Markets	1,638	1,128	Weights & Measures	Federal Egg Inspection	30,073	16,345
Total General Fund		87,097	81,075	Agricultural Development	Vermont Products Identification—Fees	420	660
					Vermont Products Identification—Labels	70	274
					Dairy Herd Replacements—Federal	14,284	-0-
					VSBA—Sheep Project	-0-	12,000
					Vermont Subterminal Market	7,598	7,598
					Market Information and Price Reporting	3,500	-0-
					Rockefeller Brothers	-0-	40,000

Vermont Agricultural Enterprises, Inc.

Vermont Agricultural Enterprises is an organization whose members are other agricultural commodity associations. It was organized in 1973 by the Vermont Department of Agriculture as a legal entity to coordinate and manage agricultural activities in the Vermont Building at Eastern States. The activities developed into an operation utilizing a major part of the building and in 1978 the legislature transferred the responsibility for management and operation of the building to the Commissioner of Agriculture. The State of Vermont Buildings Division has responsibility for maintenance, repairs and alterations.

Vermont Agricultural Enterprises, in cooperation with the Department of Agriculture, coordinates the sales and promotional activities. These activities provide Vermont Agriculture an effective means of promoting the products of our farms to over 1,000,000 people who attend the exposition.

The agricultural product sales area of the Building generates the income to finance the promotional exhibits and demonstrations. The profit from \$180,000 worth of sales in 1981 were needed to maintain the operation including the expenses of the 75 to 100 people who work in the building. Most all workers are unpaid volunteers; a

perfect example of cooperation among Vermont farm people and their organizations who exhibit and demonstrate at the "Big E." Plans are now being developed to give the interior of the building a new look in 1983.

Vermont Agriculture is fortunate to have this showplace of agriculture available in our prime marketing area on a nearly self-supporting basis.

The organization continues to sponsor the Vermont Host Program which seems to be increasing in popularity. We are proud to welcome visitors to our farms so they may see firsthand Vermont farm life and so they may better know the story of Vermont agriculture.

For the past few years Vermont Agricultural Enterprises in cooperation with Green Mountain Dairy Promotion, Inc. has sponsored Vermont Agriculture Day in the State House. This seems to provide an excellent opportunity for communication with our lawmakers and adds emphasis to the program established on a national basis as National Agriculture Day.

Everett A. Willard
Clerk

Vermont Beekeepers Association

The Vermont Beekeepers Association was formed many years ago to "engage in any activity which will promote the common interests and general welfare of Vermont's beekeeping industry and to form a friendly bond of unity among the State's beekeepers." Toward that end the Association holds two meetings of its membership annually. A summer meeting, held at alternating locations around the State, features a guest speaker experienced at keeping bees or involved with specific studies concerning bee behavior; includes reports from the State Bee Inspector on the state of the health of Vermont beekeepers' colonies; and provides an opportunity for keen competition among attendees for top prizes in the honey specialties contests. The winter meeting coincides with the Vermont Farm Show in Barre and beekeepers are encouraged to exhibit, and thus promote, their honey products at that show. Several beekeepers have taken advantage of the State-promoted Seal of Quality to attract consumers to their products. It is expected this program will be a very helpful marketing device for honey producers.

Product promotion is also undertaken by several Association members who enjoy the experience of attending the Eastern States Exposition in Springfield, Massachusetts each fall to serve at the honey booth. The booth, in the Vermont building, attracts thousands of visitors who stop by and become entranced by the activities of the bees in the observation hive, which leads to questions and education about the rudiments of keeping bees and producing honey.

There are in excess of 12,000 hives of bees in Vermont kept by hobbyists who may watch over anywhere from one to twenty hives and by serious beekeepers who may keep up to 1000 colonies. And it seems that there are as many varied ways of keeping bees as there are beekeepers, and each will stand by his or her method.

About 200 hobbyist and serious beekeepers comprise the Vermont Beekeepers Association. The Association's newsletters help keep those beekeepers up to date on new methods of combating bee diseases, on results of on-going studies of bee behavior throughout the world, on tried-and-true methods for production of pollen and better honey yields, on rearing of queens, supering for the honeyflow and its harvest, and better methods for wintering bees in Vermont. Several one-day seminars and workshops were held around the State which provided speakers on various topics of beekeeping and often were accompanied by hands-on experiences for participants.

Members participated in the State-wide nectar/pollen survey which will assist in the production of honey as well as providing a basis for assisting agriculturists with optimum crop pollination.

The Association works with the Apiary Inspection program of the Vermont Department of Agriculture to educate beekeepers about bee diseases and their eradication, and is working to provide better protection for Vermont beekeepers against mites and pests of bees which are present in other parts of the world and are presently gravitating toward northern United States.

Insecticides used to protect agricultural crops from harmful insects frequently kill large numbers of bees in Vermont and the Vermont Beekeepers Association supports research and public education to apprise agriculturists and home gardeners of the dangers caused to bees and other valuable insects by some insecticides.

Present officers of the Vermont Beekeepers Association are:

President, Fabian Little, Williamstown
Vice President, Eugenie Doyle, Randolph
Treasurer, Armand Bouchard, Northfield
Secretary, Coralie Magoon, Colchester

Respectfully submitted,
 Coralie Magoon, Secretary

Vermont Beef Producers Association

The main purposes of our association are to further the interest of beef cattle within the state through meetings, exhibits, and field days and to promote and provide better marketing facilities within the state for members.

Our year begins in January with a booth at the Vermont Farm Show. We raffle off a side of beef to further promote youth activities within the state. A great deal of informational material encompassing all beef breeds is passed out to interested people seeking to gain more knowledge about raising beef.

The annual Short Course, which is held in Burlington on the first Saturday in April, has steadily increased in attendance, regardless of the weather. Each year the sessions cover various topics pertaining to producing beef in Vermont. After lunch, working groups are formed to learn the basics of taking care of beef. The annual meeting is held on this date with many of our 200 members in attendance. Awards were given out for Cattleman of the Year: Robert Smith of Jericho. Two youth awards were presented: Junior—Scott Barnes of North Ferrisburg, Senior—Laurie Bruce of Wilder. Officers were elected as follows:

<i>President</i>	Albert Kittredge
<i>Vice President</i>	Jonathan Bump
<i>Secretary</i>	Barbara MacDonald
<i>Treasurer</i>	Polly Kelley
<i>Directors</i>	John Bober
	Willard Conant
	Walter Gaylord
	Jerry Tucker
	Rosendo Cueto, Jr.
	Frank Kelley
	Tom Higgins
	Robert Smith
	Robert Youngquist

Honorary Directors

Albert Kittredge
 David Newton
 John Price

The Field Day has been held annually the last Saturday in July at Vermont Technical College in Randolph. The morning starts off early with 15 to 20 exhibitors and their animals to be judged. Stewart Gibson of the University of Vermont did a fine job of judging. George Gast won the Senior Fitting and Showmanship and Kimberly Prior won the Junior Fitting and Showmanship. Total prize money earned by the exhibitors was \$855.00.

Another steer raffle is held at the Champlain Valley Fair, and the money that we raise is used to promote and cover expenses of our programs.

The Calf Loan Program is available to any boy or girl under the age of 19, regardless of whether or not you are a member of the Vermont Beef Producers Association, Inc. If you are chosen to receive a calf, two heifer calves are given away each year, you must raise the heifer calf and show it in at least one beef show. The heifer must be bred to a qualified bull and the female off-spring is given back to the association to give to another young boy or girl. This is a continuing program.

Our weighing and grading program takes place in both the spring and fall with between twenty and thirty farms participating. This is an excellent opportunity to find out which of your animals are the ones that you need to advance your herd with. The graders from the Extension Service are to be commended for the fine job that they have done to upgrade beef cattle in the state by this performance program and also for the countless hours they spend answering questions via telephone and personal contact.

Barbara MacDonald
 Secretary

Dairy Council of Vermont, Inc.

Dairy Council works cooperatively with health professionals, extension agents, educators, the news media, and the dairy industry to encourage good nutrition for all Vermont residents. The council executive director is a registered dietitian. A secretary is also employed. Program activities are formulated and presented to the board of directors. The board establishes a policy for the council and also reviews program accomplishments four times a year.

The council is affiliated with the National Dairy Council and utilizes programs and materials which they develop.

Programs used during this biennial period and the target audiences were: Food, Early Choice—Preschool; Food Your Choice—K-6th grade; Health 7-10th grade; Science 7-10th grade; Social Studies 7-10th grade; Film Library—Schools and Organizations; ETV Film—Public broadcast; Animal feeding demonstration—6th grade; Exhibits—educators; School Newsletter—educators; Taste Your Choice—school food service; Workshops—educators, extension service leaders, college students; Radio and television programs—consumers; National Dairy Council professorships—Medical and dietetic leaders; Special mailings—health professions.

Activities are tabulated and included in the council's annual report, which is printed and distributed to all producers and dealers that pay state Dairy Council taxes.

In 1981 the Dairy Council of Vermont contracted with the State Dairy Council for \$78,200 and with the Vermont Dairy Industry Council for \$2,500. Officers and directors who served during this period were:

1980-1981

George Livak, *President*
Marcell Booth,
Vice President
James Rooney, *Secretary-Treasurer*
Roland Aldrich, Jr.,
Past President

Directors

George Dunsmore
Albert Smith, Ph.D.
James Austin
Gordon Brown
Gloria Conant
Donna Hall
Susan Heins
Edward Holden
Douglas Kitchell
Everett Maynard
Thomas Seward
Richard Thomas
Robert Vaughan, Jr.

1981-1982

Marcell Booth, *President*
Susan Heins,
Vice President
James Rooney, *Secretary-Treasurer*
George Livak,
Past President

Directors

George Dunsmore
Albert Smith, Ph.D.
Roland Aldrich, Jr.
Gordon Brown
Gloria Conant
John Fuller
Norman Harvey
Edward Holden
Ronald Leonard
Everett Maynard
Thomas Seward
Richard Thomas
Robert Vaughan, Jr.

Vermont Dairy Industry Association

The objective of the Vermont Dairy Industry Association is to work for the welfare of the Vermont dairy industry. Each year it sponsors two educational conferences, a two-day conference and annual meeting in September

plus a Fieldmen's Conference in January which emphasizes milk quality control. The Association also provides assistance to promote programs which aid Vermont agriculture, especially the Vermont dairy industry.

Officers for the Vermont Dairy Industry Association include:

For 1980-81:

President — Terry Clark, Middlebury, VT 1981
Vice President — Donald Moore, Wells River, VT
Sec-Treas. — Henry V. Atherton, Burlington, VT
Directors:

Terry Clark, Middlebury, VT 1981
Bernard Larose, St. Albans, VT 1981
Richard Rogers, Chelsea, VT 1981
Donald Moore, Wells River, VT 1982
James Austin, White River Jct., VT 1982
Jon Stanwick, Cohocton, NY 1982
Daniel Belsito, Millbury, MA 1983
Charles Johnson, Boston, MA 1983
Ronald Work, No. Springfield, VT 1983
Robert Mullen, Ex-officio
Shirley Prushko, Ex-officio

For 1981-82:

President — Donald Moore, Wells River, VT
Vice President — Charles Johnson, Boston, MA
Sec-Treas. — Henry V. Atherton, Burlington, VT
Directors:

Donald Moore, Wells River, VT 1982
James Austin, White River Jct., VT 1982
John Raht, Vernon, NY 1982
Daniel Belsito, Millbury, MA
Charles Johnson, Southboro, MA 1983
Ronald Work, No. Springfield, VT 1983
Tom Langeway, Marshfield, VT 1984
Byron Moyer, Barre, VT 1984
Donald Race, Camillus, NY 1984
Robert Mullen, Ex-officio
Terry Clark, Ex-officio

Green Mountain Dairy Promotion, Inc.

The county committees have completed an outstanding year in their promotional activities for Green Mountain Dairy Promotion, Inc. I am very pleased that so many young people are participating and their ideas are excellent.

I hope with the additional monies made available for advertising due to the favorable court decision this year that our sales will increase with additional advertising and research being done.

We are continually threatened by unfavorable press releases by different newspapers. These articles are written without receiving detailed information and the consumer is left with an unfavorable attitude about our products. We should strive for better public relations before these releases are made because it is very detrimental to our industry and I don't believe the reporters are aware of the impact on the consumer—they are only interested in the sensational headlines.

Our committee meetings have been well attended and monies distributed for various programs at county and state levels have been well discussed and analyzed before finalized.

We are in the process of printing new placemats in cooperation with a Barre granite company whose generous financial aid helped make the project possible. Our napkins are ready for distribution as well.

The celebration of Ag Day was in March. This is a well-done project to create an awareness to the legislators

of the dairy and other agricultural entities in the state and their impact on the state's economy. The dairy committee served various dairy products.

The Eastern States Exposition continues to be a big project. The attendance at the Big E was just under one million.

Milk was served at the school patrol picnic. We feel that this is an excellent project as soft drinks are still in competition with milk; but, kids still like a cold glass of milk.

I have attended the Milk Promotion Services, Inc. annual meeting as your chairman, various state meetings, and served as a director of the New England Dairy and Food Council Board. At these meetings there is always discussion about the way milk is handled.

As members of dairy committees and dairy farmers, I feel we each have individual responsibilities to create greater demands for milk by the consumer and whenever an unfavorable situation is noticed in a dairy case in your local store or elsewhere or a public restaurant, we should try to improve the situation as it creates problems for us too.

I have appreciated serving as chairman for the past several years.

Respectfully submitted,
Catherine Beattie, Chairman

Vermont Maple Industry Council

The purposes of the Council are to promote better understanding between producers, packers, and other categories of the maple industry; and to set in motion action to solve these problems.

Accomplishments during the biennial included efforts to increase promotion of maple products. The Council joined with the Vermont Sugar Makers Association and created the Maple Promotion Board which was established to create and implement a promotion program. This board obtained funding from the Vermont Department of Agriculture, International Maple Institute and producers of the state.

Members of the Council worked to bring about the changes in the maple law. Through discussions at Council meetings, all members were kept informed and Council members were able to provide advice and guidance to the development of the maple law proposals and associated regulations.

Federal and State contacts have been made regarding funding for research programs for the Aiken Maple

Laboratory and the University of Vermont research effort. The Council has continued to encourage funding for both of these programs and efforts. The chairman of the Council served on a review team to study the Maple Research Program at the University of Vermont, and to provide recommendations for changes and improvements at the college.

Adulteration of maple syrup became a key concern of the Council. One member of the Council developed an approved test for regulatory agencies to use in checking adulteration.

The Council joined with the Vermont Sugar Makers Association to present two awards to University of Vermont students who have made outstanding accomplishments in maple.

One of the greatest benefits of the Council is the opportunity it provides the maple leaders of the state to discuss current problems and to develop solutions to these concerns.

Membership Representation

MAPLE SYRUP PROCESSORS & BLOCK SUGAR MFRS.:

Nathan M. Abbott
Edward S. Doubleday

MAPLE BLENDERS:

James Cooper
R. S. Beatty

PRODUCER- DISTRIBUTOR:

Truman Young
David Marvin

EQUIPMENT MANUFACTURERS:

Robert Bordeau
Robert F. Moore

RETAIL MAPLE OUTLETS:

Sam Cutting
Donald Harlow

BULK SYRUP PRODUCERS:

W. Robert Howrigan
Charles Branon

VERMONT MAPLE SUGAR MAKERS ASSOC.:

Wilson Clark
Dean Burrington
Ruth Wright

PUBLIC SERVICES:

Robert O. Sinclair
George Dunsmore
Leo Leferriere
C. Harry Behney

RESEARCH CATEGORY:

Fred Laing

FARM ORGANIZATION:

Bruce Urie
Harold Bergeron

SECRETARY- TREASURER:

Don McFeeters

MEMBERS-AT-LARGE:

Paul Senzok
Lyman Jenkins
Everett Willard
Robert Coombs, Jr.
Harry Yawney
Arthur Toff
Mariafranca Morselli

HONORARY MEMBERS:

Raymond T. Foulds, Jr.
Frank M. Rees
Rudolph Danforth

Vermont Morgan Horse Association 1980-1982

The Vermont Morgan Horse Association, organized in 1966 to encourage the breeding and use of Morgan horses as versatile pleasure and show horses, has 162 current members. Officers elected at the annual meeting held during the last two weeks in October are:

<i>President:</i>	Mrs. Polly S. Quinn
<i>Vice President:</i>	Mrs. Helen Claire Murphy
<i>Secretary:</i>	Kathleen Clark
<i>Treasurer:</i>	Mrs. Berna Rexford
<i>Directors:</i>	Douglas Rexford
	Luman Wadhams
	Mrs. Clara Hendin
	Mrs. Anne Ashworth
	Norman Fajans
	Richard Kaufman

As the biennium closes, our association takes justifiable pride in having been instrumental in the decision of the American Morgan Horse Association to purchase a three acre site in Shelburne, adjacent to the Museum, on which to build a permanent headquarters for the breed as soon as funds can be raised. This transaction climaxes an effort older than our Vermont association and the search for a permanent site has ranged from Vermont and Massachusetts to New York, Kentucky and Oklahoma.

The American Morgan Horse Register, upon which the integrity of the breed rests, will thus eventually come back to Vermont after an absence of over sixty years.

Begun by Col. Joseph Battell who based it on earlier work of a fellow townsman of Middlebury, Daniel Chipman Linsley, it was left as part of the Battell Estate to Middlebury College. C. C. Stillman, the first Secretary of the original Morgan Horse Club which was organized at the Vermont State Fair in White River Junction in 1909, purchased the Register and incorporated it. He continued with registry work in his New York City office until his death. As he had planned, the Register was then turned over to the Morgan Horse Club. It was maintained independently until 1974 when all functions of the Club were centralized into the renamed American Morgan Horse Association first in Hamilton and later Westmoreland, New York.

The American Morgan Horse Association has a membership of 6500 and registers about 4,000 Morgans yearly. Four hundred members reside in 10 Canadian Provinces and six other countries. A monthly magazine, "The Morgan Horse," has a circulation of 9,000. The association office employs a staff of 22 and administers an understandably substantial annual budget. We look forward to the relocation of the headquarters to Shelburne, perhaps as early as 1984.

Our Vermont association has been active in other ways as well. A new brochure on Vermont's Morgan Horse with a list of state breeders is available for distribution to information booths, Chambers of Commerce, and promotional exhibits at fairs, etc. We also published a new Directory listing Morgans owned by each member. Our VMHA

activities have developed and been expanded. A Vermont Morgan Heritage Day is planned as a second major summer event. It will combine the 4th Annual Morgan Trotting Races with a Morgan Carriage Driving competition; a day of nostalgia and special demonstrations and historical comment merging with today's increasingly popular driving event. Our Vermont Morgan Horse Show celebrating its 15th year continues to attract Morgans from all of New England, New York, and Canada. One of the state's largest horse shows, extending over three days in mid-June at the Champlain Valley Fairgrounds, this year distributed \$1900 in prize money.

Our association is dependent upon and grateful for the enthusiastic help and support of its membership. Our horse trainers cooperated to present the first Morgan Horse Association Training Clinic this April to fill a need and to help raise money for the association. Morgan breeders made a contribution by offering stallion services which were auctioned both years at winter Dinner Meetings.

A Spring Clinic and membership meeting took place at the UVM Morgan Horse Farm in Weybridge in May. Steve Davis demonstrated the early training of young Morgans with the help of the volunteer staff to Dr. Balch's comments. As an added attraction, Local Grand and World Champions showed off their winning form. Three Vermont Morgans that outmatched their competition at the Grand National Show in Oklahoma and at the Regional Show in Northhampton, Massachusetts were: Long View Sundance owned by Dom Orlandi of Essex Junction, trained and shown by Bonnie Sogoloff; Wawayanda Jessica, now owned by Nanton Farms, Saginaw, Michigan, trained and shown by Luman Wadhams, Charlotte; and UVM Dexter, owned by Charles Ross Family, Taproot Morgans, Hinesburg, trained and shown by Ben Qua. UVM's own champion stallion, UVM Watchman, put to an antique gig with Dr. Balch driving and illustrious trainer Bob Baker as passenger concluded our memorable day. It is not surprising that the UVM farm attracts 50,000 visitors from all over the world to see Morgans in this historic setting.

Promotion of the breed is effectively done through "Open Barn" events. Taproot Morgans, Hinesburg, Paramount Farms, Richmond, Wawayanda Farm, Cornwall, Rohan Morgans, Randolph Center, and Trumbull Mountain Stables in Shaftsbury have introduced Morgans to many new friends. Exhibits at major Vermont Fairs (Champlain Valley, Barton, and Rutland) continue to acquaint others with Vermont's State Animal. Our biggest promotional effort is the Living Exhibit in the Vermont Building at Eastern States Exposition where a dozen Morgans alternate on display for the entire two week period. Pictures and promotional materials are featured and questions are encouraged.

Recreational use of horses is steadily increasing and its significance to Vermont where recreational living is gaining in importance to the state's economy, should not be overlooked. As plans to remove one of the dairy breed headquarters from Vermont are made, and the dairy business suffers from need to bring overproduction in line with market, one recognizes the need for diversification in Vermont's changing agricultural industry. The Morgan, having already survived into the age of mechanization which doomed his earlier purpose is steadily growing in numbers. Nine hundred and thirteen Vermonters own over 2,000 Morgans. It is estimated that they contribute over \$2,000,000 annually to the economy. Vermont bred horses are to be found in almost every state and in Canada, England, and Australia.

Morgans continue to be Vermonters' preferred breed, enjoyed by all ages and in many ways: pleasure riding, driving, trail riding, carriage competitions dressage, eventing horse shows, sleighing, light farm work and in parades, as 4-H projects and as school horses for riding lessons. Along with the seasonal ski industry and the traditional attractions of hunting, fishing, and boating, Vermont's heritage of the Morgan Horse enriches the lives of old and new residents on a year-round basis adding its share to the state economy.

Respectfully submitted,
Polly S. Quinn, President

Vermont Plantsmen's Association, Inc.

The object of this association is to improve the conditions of floriculture and ornamental horticulture and to help beautify the state with plants through education, legislation, mutual benefits, and information of public interest. Membership is open to any person or group professionally engaged in growing, servicing, or selling floral or ornamental plants or products within the State of Vermont or those engaged in educational, experimental, or regulatory work. Associate members from other states are welcomed.

The annual meeting is held the fourth week of January.

The officers elected for 1982 are:

<i>President</i>	— Chris von Trapp, Hinesburg
<i>Vice President</i>	— Ralph Knox, Windsor
<i>Executive Secretary—</i>	
<i>Treasurer</i>	— Richard T. Salter, Reading
<i>Executive</i>	
<i>Committee</i>	— Oliver Gardner, Williston
	— David Hamlin, Swanton
	— Joan Hulbert, Barre
	— Richard Stevens, Springfield
	— Jane Short, West Brattleboro
	— Earl Welch, Bradford

Activities through 1981 to June 30, 1982, included Annual Meeting, January 1981; Flower and Garden Show,

March 1981; Field Day, August 1981; Annual Fall Meeting, October 1981; Annual Meeting, January 1982; Flower Show and Plant Sale, March 1982. The association also participated in the New England Greenhouse Conference at Boxboro, MA, in October 1980. Contributions were made to the Research Department of the University of Vermont for hardiness studies of ornamental plants. An

award was given to an outstanding student in Plant and Soil Science at UVM.

The association is actively interested in legislation concerning floriculture and ornamental horticulture and takes an active part in New England Greenhouse Conference.

Vermont Sheepbreeders Association

The VSBA has been very active in the past two years as befits a growing industry.

A two-year Vermont Sheep Project started in September 1981. The project coordinator is Becky Pearson of Stowe. There are approximately 100 participants who are upgrading their management and marketing skills through workshops, lectures, and on-farm visits. Vermont sheep producer needs are conveyed to lending institutions and other service providers.

An annual replacement ewe lamb sale has been organized and the traditional wool pool and cull ewe and feeder lamb pool have been continued and improved. Some of the best wool from the wool pool is chosen each year to spin into Vermont sheepbreeders association yarn.

Other ongoing activities include the publication of Vermont Sheep Plus, a directory of sheepbreeders and their products, and a newsletter published six times a year.

VSBA is also encouraging the Vermont sheep evaluation program, inc., which is organizing a ram performance testing project. Encouragement has also been given to a tele-auction of lambs in the fall of 1981 and to the newly-formed Green Mountain Lamb Growers Coop.

Officers

<i>President:</i>	Don Mitchell
<i>Vice President:</i>	Cornelia Swayze
<i>Secretary:</i>	Ann Clay
<i>Treasurer:</i>	Gay Johnson

Directors

Jim Bolton	Bill Kruesi
Linda Doane	Walter Levering
Todd Hescok	Geoff Naylor
Nancy Kelley	Shapleigh Smith
Tom Koch	Linda Wiggett

Representatives

Vermont Ag Enterprises:	Connie Stryker
Eastern Seaboard Sheep Council:	Cornelia Swayze
Vermont Farm Shop Representative:	Charlie Mason

Committee Chairmen:

Finance Committee:	Gay Johnson
Lamb Marketing Committee:	Bill Kruesi
Yarn Committee:	Carol Haddock
Education/Publications/ Promotion Committee:	Linda Doane
Wool Pool Committee:	Tom Koch

New Hampshire-Vermont Christmas Tree Association

The association holds three major meetings each year. A January meeting is held in conjunction with the Vermont Farm Show in Barre. Meetings held in June and October include tours of tree plantations. At the June 1980 meeting, held at John Ahrens, Elmore, members received license renewals for pesticide usage.

The association has published "Superior Balsam" a report of the work of Leighton Cree. Leigh Cree White, daughter of Leighton Cree, wrote the publication.

Association membership continues to increase. At this time, there are 247 members. Two \$100 scholarships were awarded from the scholarship fund. These are awarded to students enrolled in college Forestry programs. Recipients were Thomas Grime, St. Johnsbury, Vermont and Mark Sargent, New Hampshire. Raymond T. Foulds, Jr. retiring Extension Service Forester, University of Vermont, was honored by the association with a gift of money and a plaque for his effort and dedication to the association.

The Vendor, a listing of trees, wreaths, boughs, and cones for sale by members, has been published and distributed each year.

The association participates in the Eastern States Exposition as an exhibitor and carries out educational and promotional activities during the 12 day event.

The twenty-fifth anniversary of the association was observed in 1981. The event was held at the Lorrainy Marchessault's family plantation, Lemington. A history of the association for the 25 year period was prepared by Louis and Mary Day. Outstanding member awards were pre-

sented. William Murray, President of the National Association, attended.

1982 Officers

<i>President:</i>	William Weir
<i>Vice President:</i>	Herbert Hunt
<i>Executive Secretary & Treasurer:</i>	Phillip Grime
<i>Recording Secretary:</i>	Pamela Dwyer

Directors

F. W. Conley
Oliver Underhill
Louis Day
Michael Godzyk
Mrs. Walter
Bradley
William Weir
Gregory DeCell
Max Paine, Sr.
Robert Slade
Robert Youngquist
Albert DeCell
Jack Dwyer

Alternate Directors—elected annually:

George Tyler
Timothy Carver

National Christmas Tree Assoc. Delegate:

Max Paine, Sr.

VERMONT AGRICULTURAL STATISTICS

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THOMAS MARR
DAVID MUELLER
STEVE WILLIAMS

SUPERVISORY FIELD ENUMERATOR

DOROTHY LACASSE, WILLISTON

SUPPORT STAFF

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ELIZABETH HARROLD
LARRY KELLY
JOAN PARKER
LEAH ROCHA
JOYCE SUPRY
ADRIENNE ZAPPIA

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Dairy Highlights

Milk production in the Green Mountain state remains the leading agricultural enterprise. The total value of production reached \$307.9 million, 13 percent above the 1979 value and almost four and a half times more than in 1950. The increase was the result of more production and greater value per hundredweight.

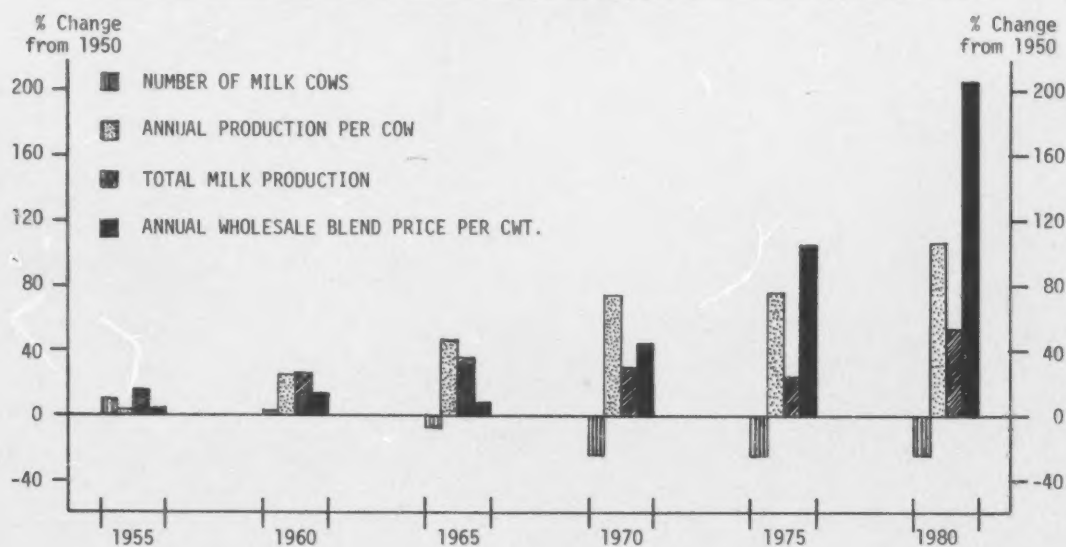
Milk production in Vermont during 1980 totaled 2.3 billion pounds, up 5 percent from the 1979 total and the highest production on record. Both number of milk cows and rate per cow, were above the 1979 level. The trend in increased production has been due to increased rate per cow through improved breeding and feeding techniques. The rate of production per cow in 1980 was 12,202 pounds, up from 11,970 pounds in 1979 and well above the 5,900 pounds in 1950.

The declining number of milk cows in Vermont was halted in 1980 as the average number of milk cows increased 5,000 head in 1980 to 188,000. This was the highest average since 1977, but well below the 1965 level of 233,000 cows.

The price received by Vermont farmers for milk sold wholesale averaged \$13.40 per cwt. during 1980, compared with \$12.50 for 1979. For the past 20 years that monthly milk prices have been published, the price has risen from \$4.97 in 1960 to the \$13.40 in 1980.

Milk production disposition has changed dramatically since 1950. Milk used on farms in 1980 at 44 million pounds was only 48 percent of the total used on farms in 1950. Also, milk sold directly to consumers has decreased from 36 million pounds in 1950 to only 5 million in 1980. Milk sold to plants has increased from 1,389 million pounds in 1950 to 2,245 million pounds in 1980.

PERCENT CHANGE FROM 1950 IN MILK COWS, ANNUAL PRODUCTION PER COW,
TOTAL MILK PRODUCTION AND WHOLESALE BLEND PRICE PER CWT., VERMONT, 1955-1980



MILK COWS, MILK PRODUCTION PER COW, TOTAL MILK PRODUCED, VERMONT, 1965-1980

MILK COWS ON FARMS

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
Thousand Head													
1965	238	238	238	237	235	234	234	232	232	230	225	222	233
1970	194	194	194	194	194	194	194	194	194	194	194	194	194
1975	192	192	192	193	193	193	194	194	194	194	194	194	193
1976	194	194	194	194	194	193	192	193	194	194	194	194	194
1977	193	192	190	188	188	188	190	192	193	193	193	194	191
1978	194	190	188	185	182	182	182	185	185	185	187	188	186
1979	188	186	184	182	180	180	181	182	183	184	185	186	183
1980	187	187	187	186	186	186	188	188	188	188	189	190	188

MILK PRODUCTION PER COW

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
Pounds													
1965	705	645	775	790	855	830	740	700	690	700	670	720	8,820
1970	795	720	845	870	965	960	885	850	830	830	780	825	10,155
1975	805	735	860	880	980	990	900	870	830	845	820	875	10,409
1976	860	825	925	980	1,025	995	945	890	865	865	790	845	10,789
1977	850	785	920	945	1,035	1,040	960	915	900	890	850	890	10,995
1978	890	820	980	1,010	1,080	1,070	1,010	970	930	930	870	925	11,484
1979	930	870	980	1,020	1,100	1,080	1,010	990	980	990	950	990	11,907
1980	985	935	1,035	1,055	1,110	1,110	1,055	1,030	1,000	1,005	930	990	12,202

TOTAL MILK PRODUCTION

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
Million Pounds													
1965	168	154	184	187	201	194	173	162	160	161	151	160	2,055
1970	154	140	164	169	187	186	172	165	161	161	151	160	1,970
1975	155	141	165	170	189	191	175	169	161	164	159	170	2,009
1976	167	160	179	190	199	192	181	172	168	168	153	164	2,093
1977	164	151	175	178	195	196	182	176	174	172	164	173	2,100
1978	173	156	184	187	197	195	184	179	172	172	163	174	2,136
1979	175	162	180	186	198	194	183	180	179	182	176	184	2,179
1980	184	175	194	196	206	206	198	194	188	189	176	188	2,294

MONTHLY PRICES RECEIVED FOR MILK SOLD WHOLESALE AND ANNUAL, VERMONT, 1960-1980

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
Dollars Per CWT.													
1960	5.40	5.30	4.90	4.40	4.20	4.25	4.75	5.20	5.45	5.50	5.55	5.45	4.97
1965	4.95	4.95	4.70	4.30	4.15	4.15	4.60	4.85	5.10	5.35	5.45	5.35	4.79
1970	6.60	6.45	6.25	6.15	5.90	5.80	6.30	6.55	6.85	7.05	6.90	6.80	6.44
1975	8.70	8.70	8.45	8.25	8.10	8.05	8.75	9.40	10.10	10.60	10.80	10.90	9.15
1976	10.90	10.50	10.40	9.70	9.60	9.50	10.10	10.70	11.00	11.20	10.90	10.40	10.40
1977	10.20	10.10	9.90	9.80	9.50	9.70	10.20	10.60	11.00	11.10	11.10	10.80	10.30
1978	10.80	10.90	10.60	10.40	10.40	10.30	10.80	11.40	11.90	12.50	12.60	12.30	10.20
1979	12.40	12.40	12.20	11.90	11.80	11.70	12.10	12.80	13.20	13.50	13.60	13.20	12.50
1980	13.10	13.10	13.00	12.80	12.70	12.50	13.00	13.50	14.00	14.50	14.50	14.50	13.40

MILK PRODUCTION, DISPOSITION AND INCOME, VERMONT, 1950-1980

YEAR	PRODUCTION OF MILK & MILKFAT		MILK USED ON FARMS WHERE PRODUCED			MILK MARKETED			INCOME	
	Milk	Milkfat	Fed To Calves	Milk, Cream & Butter	Total	To Plants And Dealers	Direct To Consumer	Total	Cash Receipts From Marketing	Value of Production
Million Pounds						1,000 Dollars				
1950	1,516	62	29	62	91	1,389	36	1,425	65,004	68,978
1955	1,726	69	33	48	81	1,616	29	1,645	76,429	80,259
1960	1,876	74	28	31	59	1,796	21	1,817	91,994	94,926
1965	2,055	79	22	24	46	1,985	24	2,009	97,402	99,668
1970	1,970	74	17	18	35	1,910	25	1,935	126,451	128,641
1975	2,009	74	30	16	46	1,955	8	1,963	185,110	189,449
1976	2,093	77	29	16	45	2,040	8	2,048	213,648	218,300
1977	2,100	77	30	17	47	2,045	8	2,053	212,123	216,930
1978	2,136	79	24	18	42	2,090	4	2,094	234,843	239,659
1979	2,179	80	26	19	45	2,130	4	2,134	267,068	272,593
1980	2,294	84	27	17	44	2,245	5	2,250	302,016	307,855

LIVESTOCK HIGHLIGHTS

Livestock producers in Vermont received over \$42 million from the sale of cattle, hogs, sheep and wool, and honey in 1980, 22 percent less than the previous year, but twice as large as the total received in 1950. The cash receipts were up from 1979 only for hogs and pigs.

CATTLE AND CALVES

The number of cattle and calves in Vermont on January 1, 1981 was 339,000 head, down from 340,000 on January 1, 1980 and noticeable below the 428,000 on January 1, 1950. The January 1, 1981 cattle inventory was made up of 190,000 milk cows, 69,000 milk replacement heifers, 11,000 beef cows, 2,000 beef replacements, 1,000 other heifers 500 pounds and over, 3,000 bulls, 2,000 steers and 61,000 bull and heifer calves under 500 pounds.

The 1980 calf crop in the state was 180,000 head, 2 percent below the 1979 total but 5,000 head above the record low crop produced in 1978. The declining number of calves born continues the downward trend from the peak number set in 1955.

Cash receipts in 1980 for cattle and calves was 39.1 million, down from \$53.1 million in 1979. The decrease is attributed mostly to fewer marketings but also lower calve prices.

The total inventory value on January 1, 1981 was \$296.6 million, 15 percent above January 1, 1980 and over four and a half times greater than January 1, 1950. The average value per head on January 1, 1981 was \$875, up from \$760 on January 1, 1980 and \$147 on January 1, 1950.

HOGS AND PIGS

The inventory of hogs and pigs in Vermont on December 1, 1980 totaled 8,000 head, down from 8,500 on December 1, 1979 and 18,000 on December 1, 1950. Breeding stock at 2,400 was up 41 percent over a year ago. Market hog numbers at 5,600 were down 18 percent from a year earlier.

The total pig crop for 1980 (December 1979-November 1980) was 35,900, up more than double the 14,500 pig crop of the previous year. Sows farrowings for the year totaled 5,200, up noticeably from the 1,900 that farrowed in 1979, but litter size averaged only 6.9 compared with 7.7 for 1979. The spring (December-May) pig crop for 1980 totaled 18,300, over two and a half times the 1979 spring crop. The 2,500 sows farrowed produced an average 7.3 pigs per litter. The fall (June-November) pig crop was 17,600 pigs, up over two times from a year ago. There were 2,700 sows farrowed averaging 6.5 pigs per litter.

The value of the inventory on December 1, 1980 was \$688,000, up from \$536,000 on December 1, 1979 and \$410,000 on December 1, 1950. Cash receipts from hogs and pigs during 1980 was \$3.3 million, up from \$1.2 million in 1979 and \$666,000 in 1950.

SHEEP AND LAMBS

January 1, 1981 sheep numbers on Vermont farms totaled 9,200 head, up from the 8,200 head on January 1, 1980 but below the 10,000 head on January 1, 1950. Of the total sheep stock, 6,000 head were ewes one year and older, 400 head were rams and wethers one year and older, 2,200 head were ewe lambs and 600 head were ram and wether lambs.

The lamb crop in 1980 totaled 7,300 head, up 1 percent from the 7,200 lambs saved during 1979. The lambing rate in 1980 was 129 per 100 ewes one year and older, compared with a rate of 120 lambs in 1979.

Total inventory value of sheep and lambs on January 1, 1981 was \$819,000, up from \$623,000 on January 1, 1980 and \$143,000 on January 1, 1950. Cash receipts from sheep and lambs sold in 1980 was \$203,000, down from \$282,000 in 1979, but well above the \$86,000 in 1950.

WOOL

Wool production in 1980 totaled 56,000 pounds, up 2,000 pounds from the 1979 total, but down from the 63,000 pounds produced in 1950. Total value of wool in 1980 was \$46,000, unchanged from 1979 but above the \$30,000 value in 1950. The price per pound of wool in 1980 was 82¢ compared with only 48¢ in 1950.

BEE AND HONEY

Apiarists in Vermont kept 9,000 bee colonies in 1980, unchanged from 1979 but down from the 10,000 in 1950. Honey production in 1980 totaled 252,000 pounds, down from 378,000 pounds in 1979 and 300,000 pounds in 1950. Value of honey production in 1980 was \$243,000, down from the \$442,000 in 1979 but above the \$82,000 in 1950. Apiarists received 96.3¢ per pound for honey in 1980, below the \$1.17 per pound in 1979, but well above the 27.5¢ in 1950.

CATTLE: NUMBER AND VALUE OF ALL CATTLE AND CALVES ON FARMS, JANUARY 1, VERMONT, 1950-1981

YEAR	NUMBER	VALUE	
		PER HEAD	TOTAL
	1,000 Head	Dollars	1,000 Dollars
1950	428	147.00	62,916
1955	474	117.00	55,458
1960	427	186.00	79,422
1965	386	166.00	64,076
1970	337	255.00	85,935
1975	336	305.00	102,480
1976	346	345.00	119,370
1977	338	390.00	131,820
1978	336	400.00	134,400
1979	329	590.00	194,110
1980	340	760.00	258,400
1981	339	875.00	296,625

CATTLE: JANUARY 1, INVENTORY BY CLASSES, VERMONT, 1970-1981

YEAR	ALL CATTLE AND CALVES	COWS & HEIFERS THAT HAVE CALVED		HEIFERS 500 LBS. AND OVER			STEERS 500 LBS.+	BULLS 500 LBS.+	STEERS, HEIFERS & BULLS -500 LBS.
		BEEF	MILK	BEEF COW REPLACEMENTS	MILK COW REPLACEMENTS	OTHER			
1,000 Head									
1970	337.0	15.0	194.0	3.0	59.0	7.0	3.0	5.0	51.0
1975	336.0	14.0	192.0	4.0	62.0	4.0	3.0	5.0	52.0
1976	346.0	14.0	194.0	5.0	63.0	4.0	3.0	5.0	58.0
1977	338.0	13.0	193.0	4.0	63.0	4.0	3.0	5.0	53.0
1978	336.0	13.0	194.0	3.0	61.0	3.0	3.0	5.0	54.0
1979	329.0	11.0	188.0	3.0	62.0	3.0	3.0	4.0	55.0
1980	340.0	13.0	187.0	3.0	68.0	2.0	3.0	4.0	60.0
1981	339.0	11.0	190.0	2.0	69.0	1.0	2.0	3.0	61.0

CATTLE: JANUARY 1, INVENTORY BY SEX AND AGE, VERMONT, SELECTED YEARS, 1950-1969

YEAR	ALL CATTLE AND CALVES	COWS & HEIFERS 2 YEARS AND OLDER		HEIFERS 1-2 YEARS OLD		STEERS 1 YEAR AND OLDER	BULLS 1 YEAR AND OLDER	ALL CALVES
		KEPT FOR MILK	OTHER	KEPT FOR MILK	OTHER			
1,000 Head								
1950	428.0	287.0	2.0	58.0	1.0	1.0	12.0	67.0
1955	474.0	320.0	3.0	71.0	1.0	3.0	10.0	66.0
1960	427.0	285.0	3.0	59.0	2.0	2.0	7.0	69.0
1965	386.0	266.0	4.0	50.0	2.0	2.0	5.0	57.0
1969	340.0	222.0	12.0	43.0	6.0	2.0	4.0	51.0

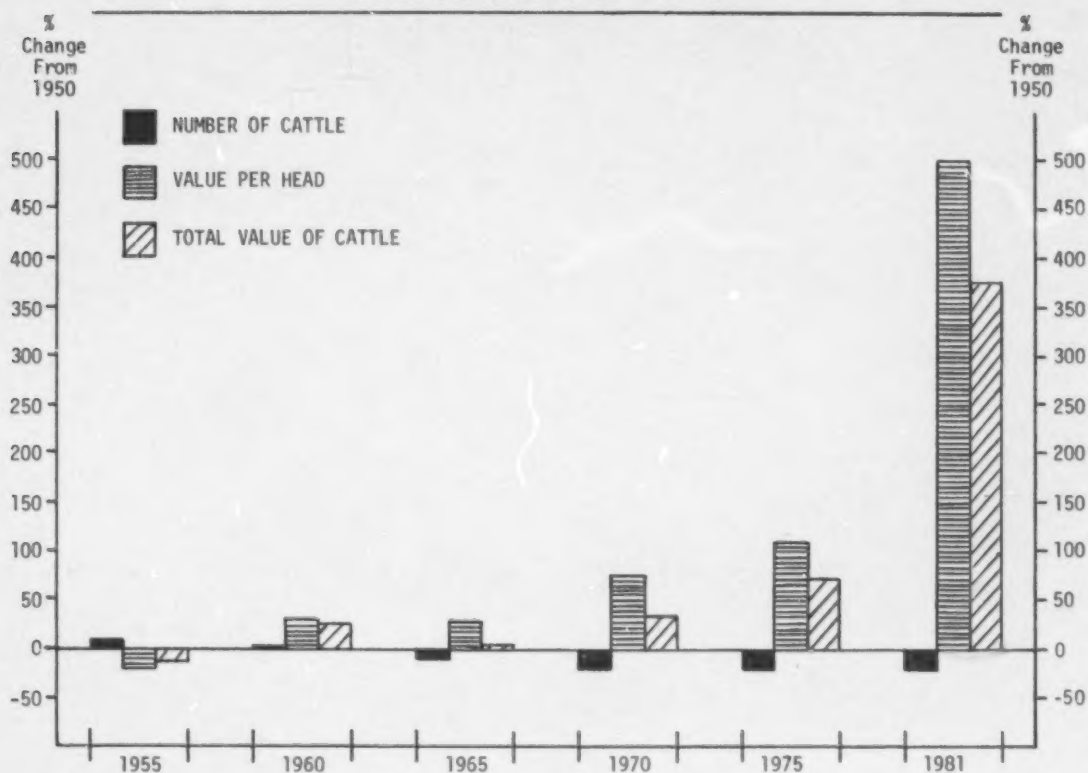
CATTLE AND CALVES: INVENTORY, SUPPLY, AND DISPOSITION, VERMONT, 1950-1980

YEAR	ON HAND JAN. 1 ALL CATTLE	CALF CROP	INSHIPMENTS	MARKETINGS		FARM SLAUGHTER CATTLE & CALVES	DEATHS	
				CATTLE	CALVES		CATTLE	CALVES
1,000 Head								
1950	428	223	13	79	136	7	7	16
1955	474	271	8	67	181	7	6	18
1960	427	245	6	61	156	5	6	14
1965	386	216	9	80	149	6	6	15
1970	337	196	16	66	124	2	5	13
1975	336	187	8	83	78	3	5	16
1976	346	183	13	101	82	3	6	12
1977	338	184	19	103	72	2	8	20
1978	336	175	9	97	74	2	4	14
1979	329	184	5	79	76	2	5	16
1980	340	180	5	55	100	4	7	20

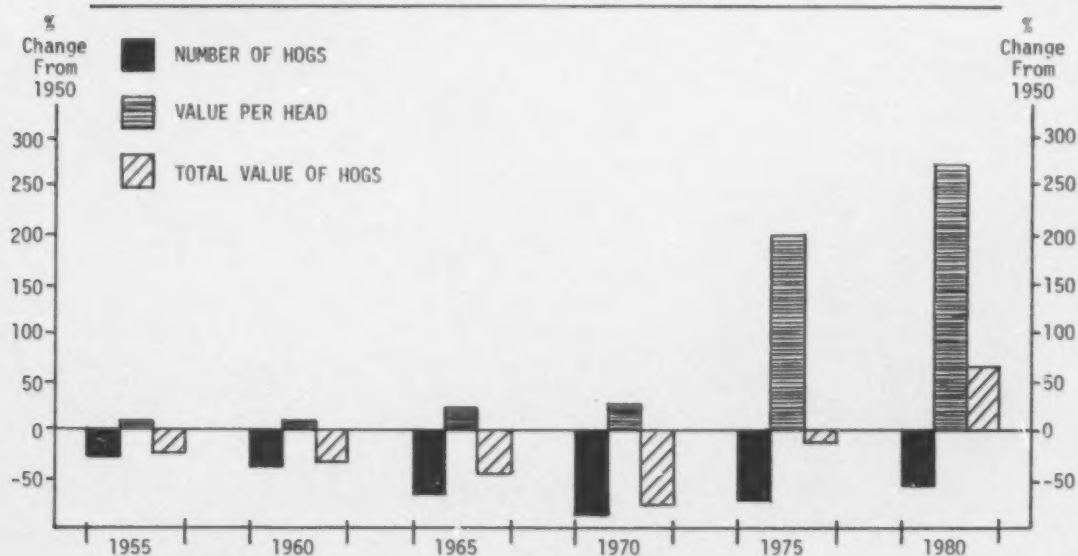
CATTLE AND CALVES: PRODUCTION AND INCOME, VERMONT, 1950-1980

YEAR	PRODUCTION	MARKETINGS	PRICE PER 100 LBS.		CASH RECEIPTS	VALUE OF HOME CONSUMPTION	GROSS INCOME
			CATTLE	CALVES			
1,000 Pounds			Dollars		1,000 Dollars		
1950	64,460	75,560	16.50	21.20	13,591	197	13,788
1955	78,565	74,275	9.20	13.80	7,659	280	7,939
1960	66,120	69,360	14.40	19.10	10,716	438	11,154
1965	66,150	88,970	13.00	17.80	12,262	580	12,842
1970	68,470	76,020	19.40	29.70	15,898	745	16,643
1975	92,075	89,241	21.60	23.20	19,385	809	20,194
1976	105,435	110,343	24.90	29.30	27,790	1,363	29,153
1977	99,015	112,295	25.80	35.00	29,552	991	30,543
1978	93,985	106,485	40.40	56.00	44,030	1,551	45,581
1979	96,215	90,895	57.00	76.00	53,075	1,642	54,717
1980	65,435	65,239	58.00	72.00	39,053	3,118	42,171

CHANGES FROM 1950 IN NUMBERS AND VALUE OF CATTLE,
VERMONT, Selected Years, 1955-1981



CHANGES SINCE 1950 IN NUMBERS, VALUE PER HEAD, TOTAL VALUE OF HOGS,
VERMONT, Selected Years, 1955-1980



HOGS: NUMBER AND VALUE OF HOGS ON FARMS DECEMBER 1, VERMONT, 1950-1980

YEAR	NUMBER			VALUE	
	BREEDING	MARKET	TOTAL	PER HEAD	TOTAL
		1,000 Head		Dollars	1,000 Dollars
1950	1/	1/	18.0	22.80	410
1955	1/	1/	13.0	24.40	293
1960	1/	1/	11.0	24.10	265
1965	1.0	6.0	7.0	26.80	209
1970	.6	3.4	4.0	29.80	118
1975	1.5	3.5	5.0	68.50	343
1976	1.3	4.7	6.0	55.00	330
1977	1.6	5.4	7.0	75.50	529
1978	1.3	5.0	6.3	86.00	542
1979	1.7	6.8	8.5	63.00	536
1980	2.4	5.6	8.0	86.00	688

1/ Not available.

HOGS: PRODUCTION AND INCOME, VERMONT, 1950-1980

YEAR	PRODUCTION	MARKETING	PRICE PER 100 POUNDS	CASH RECEIPTS	VALUE OF HOME CONSUMPTION	GROSS INCOME
	1,000 Pounds		Dollars		1,000 Dollars	
1950	5,250	3,828	17.40	666	353	1,019
1955	3,585	1,562	16.20	253	305	558
1960	3,480	2,236	14.40	322	195	517
1965	2,849	2,585	17.40	450	78	528
1970	1,649	1,284	19.00	244	77	321
1975	2,403	1,941	45.00	873	197	1,070
1976	2,615	2,094	45.00	942	205	1,147
1977	3,233	2,476	37.00	916	168	1,084
1978	2,882	2,555	45.00	1,150	246	1,396
1979	4,019	2,784	44.00	1,225	400	1,625
1980	10,908	8,994	37.00	3,328	664	3,992

PIG CROP, SOWS FARROWED AND PIGS SAVED, VERMONT, 1950-1980

YEAR	SPRING CROP DEC - MAY			FALL CROP JUN - NOV			TOTAL PIG CROP
	Sows Farrowed	Pigs Per Litter	Pigs Saved	Sows Farrowed	Pigs Per Litter	Pigs Saved	
1,000 Head							
1950	2.0	6.5	13.0	1.0	7.4	10.0	23.0
1955	1.0	6.4	9.0	1.0	7.3	9.0	18.0
1960	1.3	7.2	9.4	1.3	7.2	7.2	16.6
1965	.8	7.6	6.1	.8	7.0	5.6	11.7
1970	.5	7.2	3.6	.5	6.8	3.4	7.0
1975	.7	6.7	4.7	.5	6.6	3.3	8.0
1976	.7	7.0	4.9	.6	7.5	4.5	9.4
1977	.7	7.2	5.0	.8	7.1	5.7	10.7
1978	.6	7.3	4.4	.7	7.2	5.0	9.4
1979	.9	7.8	7.0	1.0	7.5	7.5	14.5
1980	2.5	7.3	18.3	2.7	6.5	17.6	35.9

HOGS: INVENTORY NUMBERS, PIG CROP AND DISPOSITION, VERMONT, 1950-1980

YEAR	ON HAND DEC. 1 PREVIOUS YEAR	PIG CROP		MARKETINGS	FARM SLAUGHTER	DEATHS
		DEC-MAY	JUN-NOV			
	1,000 HEAD	1,000 Head			1,000 Head	
1950	18.0	13.0	10.0	9.0	13.0	23.0
1955	12.0	9.0	9.0	5.0	9.0	3.0
1960	11.0	9.4	7.2	8.6	6.0	3.0
1965	9.0	6.1	5.6	10.7	2.0	1.0
1970	4.2	3.6	3.4	5.5	.9	.8
1975	5.1	4.7	3.3	7.3	.5	.3
1976	5.0	4.9	4.5	7.6	.5	.3
1977	6.0	5.0	5.7	8.8	.5	.4
1978	7.0	4.4	5.0	9.1	.6	.4
1979	6.3	7.0	7.5	10.9	1.0	.4
1980	8.5	18.3	17.6	32.0	3.0	1.4

SHEEP AND LAMBS: INVENTORY NUMBERS, LAMB CROP AND DISPOSITION, VERMONT 1950 - 1980

YEAR	ON HAND JAN. 1 ALL SHEEP AND LAMBS	LAMB CROP	MARKETING		FARM SLAUGHTER SHEEP AND LAMBS	DEATHS SHEEP AND LAMBS
			SHEEP	LAMBS		
1,000 Head						
1950	10.0	7.0	2.0	3.0	1.0	2.0
1955	12.0	8.0	-	3.0	1.0	3.0
1960	12.0	9.0	2.4	5.1	.3	2.2
1965	8.3	6.3	1.4	3.5	.3	1.1
1970	6.7	5.5	1.6	2.8	.3	1.1
1975	6.8	5.7	1.1	2.9	.6	1.0
1976	6.9	6.0	1.1	2.8	.6	1.3
1977	7.1	6.2	.5	2.6	.6	1.7
1978	7.9	6.7	1.5	3.1	.8	1.2
1979	8.0	7.2	1.7	3.6	.5	1.2
1980	8.2	7.3	1.5	3.1	.7	1.0

SHEEP AND LAMBS: PRODUCTION AND INCOME, VERMONT 1950-1980

YEAR	PRODUCTION	MARKETINGS	PRICE PER 100 LBS.		CASH RECEIPTS	VALUE OF HOME CONSUMPTION	GROSS INCOME
			SHEEP	LAMBS			
1,000 Pounds			Dollars		1,000 Dollars		
1950	372	1/ 427	11.50	21.80	86	3	89
1955	423	1/ 228	6.10	18.20	46	7	53
1960	536	1/ 645	6.40	17.90	87	3	90
1965	440	416	6.20	20.50	65	4	69
1970	391	390	8.60	25.00	70	9	79
1975	457	360	22.00	62.00	166	51	217
1976	440	319	24.00	66.00	151	67	218
1977	442	238	25.00	67.00	131	68	199
1978	542	398	35.00	80.00	227	109	336
1979	594	476	36.00	81.00	282	83	365
1980	628	355	43.00	76.00	203	127	330

1/ Excludes interfarm sales within the state.

WOOL: FARM PRODUCTION, PRICE AND VALUE, VERMONT 1950-1980

YEAR	SHEEP SHORN	WEIGHT PER FLEECE	SHORN WOOL PRODUCTION	PRICE PER POUND	VALUE
	1,000 Head	Pounds	1,000 Pounds	Cents	1,000 Dollars
1950	9.0	7.0	63	48	30
1955	11.0	6.8	75	49	37
1960	11.0	7.3	80	49	39
1965	7.5	8.1	38	55	21
1970	6.1	8.0	49	43	21
1975	5.6	6.9	39	40	16
1976	5.7	7.4	42	64	21
1977	6.2	6.8	42	74	31
1978	7.3	7.5	55	76	42
1979	7.5	7.2	54	85	46
1980	7.8	7.2	56	82	46

SHEEP AND LAMBS: NUMBER AND VALUE ON FARMS, JANUARY 1, VERMONT, 1950-1981

YEAR	NUMBER	VALUE PER HEAD	TOTAL VALUE
	1,000 Head	Dollars	1,000 Dollars
1950	10.0	14.30	143
1955	12.0	13.20	158
1960	12.0	15.60	187
1965	8.3	14.30	119
1970	6.7	19.50	131
1975	6.3	42.50	272
1976	6.9	43.50	300
1977	7.1	45.00	320
1978	7.9	48.00	379
1979	8.0	57.00	456
1980	8.2	76.00	623
1981	9.2	89.00	819

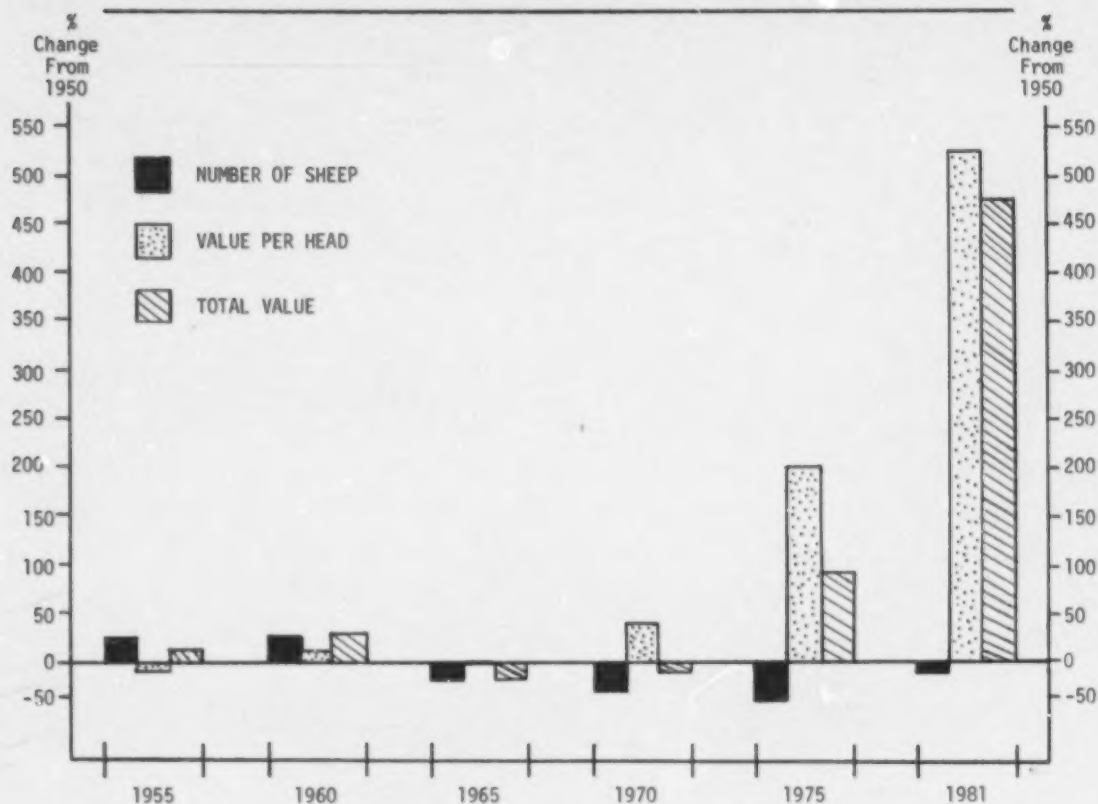
SHEEP AND LAMBS: INVENTORY NUMBER BY CLASS, JANUARY 1, VERMONT, 1950-1981

YEAR	ALL SHEEP AND LAMBS	LAMBS			ONE YEAR AND OVER	
		ALL LAMBS	EWES	WETHERS AND RAMS	EWES	WETHERS AND RAMS
	1,000 Head		1,000 Head		1,000 Head	
1950	10.0	2.0	2.0	--	7.0	1.0
1955	12.0	2.0	2.0	--	9.0	1.0
1960	12.0	2.0	2.0	--	9.0	1.0
1965	8.3	1.7	1.4	.3	6.0	.6
1970	6.7	1.4	1.1	.3	5.0	.3
1975	6.3	1.4	1.0	.4	4.6	.3
1976	6.9	1.5	1.1	.4	5.1	.3
1977	7.1	1.7	1.1	.6	5.1	.3
1978	7.9	1.9	1.3	.6	5.6	.4
1979	8.0	2.0	1.4	.6	5.6	.4
1980	8.2	2.2	1.7	.5	5.6	.4
1981	9.2	2.8	2.2	.6	6.0	.4

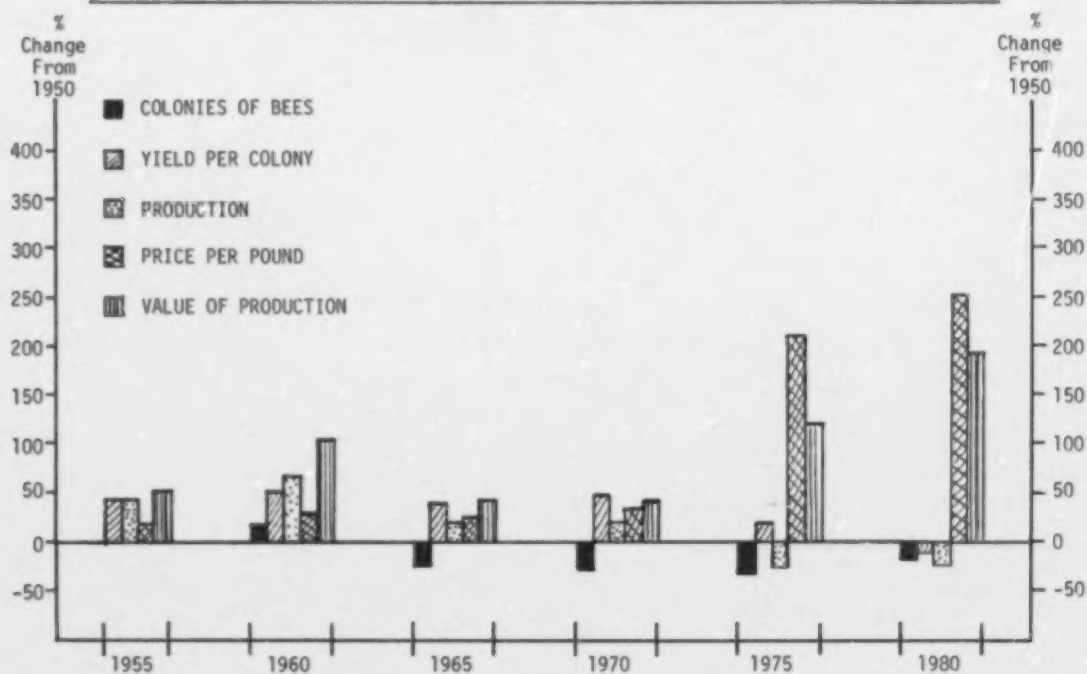
BEES, HONEY AND BEESWAX: COLONIES OF BEES, PRODUCTION,
PRICE PER POUND AND VALUE OF PRODUCTION, VERMONT, 1950-1980

YEAR	COLONIES OF BEES	HONEY				BEESWAX		
		YIELD PER COLONY	PRODUCTION	PRICE PER POUND	VALUE OF PRODUCTION	PRODUCTION	PRICE PER POUND	VALUE OF PRODUCTION
	1,000	Lbs.	1,000 Lbs.	Cents	1,000 Dols.	1,000 Lbs.	Cents	1,000 Dols.
1950	10	30	300	27.5	82.0	7	43	3
1955	10	41	410	29.9	12.3	8	51	4
1960	11	44	484	34.2	166.0	8	46	4
1965	8	41	328	33.0	108.0	5	44	2
1970	7	44	308	34.8	107.0	6	60	4
1975	6	35	210	84.9	175.0	4	105	3
1976	7	43	301	84.3	254.0	4	105	4
1977	8	24	192	88.6	170.0	2	150	3
1978	9	35	315	93.6	295.0	4	160	6
1979	9	42	378	117.0	442.0	5	160	8
1980	9	28	252	96.3	243.0	3	184	6

CHANGES FROM 1950 IN NUMBERS AND VALUE OF SHEEP, VERMONT, 1955-1981



BEE AND HONEY CHANGES FROM 1950, VERMONT, 1955-1980



VERMONT POULTRY REVIEW

Poultrymen in Vermont received \$7.0 million from the sale of eggs, and chickens in 1980, 2 percent more than the previous year, but 16 percent under the total received in 1950. Ninety-nine percent of the cash receipts in 1980, however, came from the sale of eggs.

EGGS

Vermont produced 100 million eggs in 1980, just 1 percent more than the 99 million produced in 1979, but substantially below the 173 million produced in 1950. Egg production has generally been declining since 1950 as the number of layers have decreased. The average rate of lay per day was 68 percent in 1980, down from the 70 percent rate in 1979, but still noticeably higher than the 56 percent rate in 1950.

Cash income from the sale of eggs was \$6.9 million in 1980, above the 6.7 million in 1979, and up from 6.2 million in 1950. The increase in cash income from 1950 is due to the increase in egg prices. The average price of eggs per dozen rose from 83.1 cents in 1979 to 84.6 cents in 1980. In 1950, the price was 48.0 cents per dozen.

CHICKENS

The number of chickens (excluding broilers) in Vermont on December 1, 1980 was 435,000, down from 506,000 the previous year and well below the 990,000 birds of December 1, 1950. Hens and pullets of laying age accounted for 342,000 of the total on December 1, 1980. A year earlier, on December 1, 1979, there were 410,000 hens and pullets of laying age, and on December 1, 1950 the number was 922,000. The total inventory value of all chickens on December 1, 1980 was \$1.0 million, 12 percent below December 1, 1979 and 52 percent below the inventory value on December 1, 1950. Average value per bird was \$2.35 on December 1, 1980, up from \$2.30 the previous year and also above the \$2.15 value on December 1, 1950.

Cash receipts for chickens sold in 1980 totaled \$101,000, a decrease from \$154,000 in 1979. The decrease from 1979 was a result of the lower price per pound received in 1980. Cash receipts for chickens sold in 1950 were \$2.1 million. In 1950, more than 6 times as many chickens were sold as in 1980, for about 3 times the 1980 price per pound.

POULTRY INVENTORY, VERMONT, 1975-1980

Specie & Class	Number On Farms, December 1					
	1975	1976	1977	1978	1979	1980
Thousand Head						
Chickens, Excluding Broilers.....	613	624	598	512	506	435
Hens And Pullets Of Laying Age:						
Hens.....	125	138	167	132	143	140
Pullets.....	347	337	323	293	267	202
Pullets Not of Laying Age:						
3 Months & Older.....	83	73	30	57	44	52
Under 3 Months.....	55	73	72	26	49	33
Other Chickens, Excluding Broilers.....	3	3	6	4	3	8

CHICKENS: PRODUCTION, DISPOSITION, CASH RECEIPTS, AND GROSS INCOME, VERMONT, 1950-1980 1/

YEAR	NUMBER OF BIRDS			LIVEWEIGHT			PRICE PER POUND	CASH RECEIPTS	VALUE OF CHICKENS CONSUMED	GROSS INCOME
	PRODUCED 2/ 1,000	CONSUMED 3/ 1,000	SOLD	PRODUCED 2/ 1,000 Pounds	CONSUMED 3/ 1,000 Pounds	SOLD				
1950	1,549	180	1,474	8,483	954	8,107	25.9	2,100	247	2,347
1955	1,839	183	1,683	8,735	952	7,910	21.6	1,709	206	1,915
1960	790	127	720	4,031	673	3,672	15.9	584	107	691
1965	467	67	438	2,427	315	2,321	11.0	255	35	290
1970	364	15	334	1,979	72	1,904	9.5	183	7	190
1975	302	9	310	1,428	43	1,581	10.2	161	4	165
1976	429	9	377	2,128	43	1,960	13.3	261	6	267
1977	308	9	305	1,701	43	1,586	11.3	179	5	184
1978	262	9	333	1,485	43	1,732	12.3	213	5	218
1979	228	9	225	1,127	43	1,170	13.2	154	6	160
1980	171	9	233	929	43	1,212	8.3	101	4	105

1/ Excludes commercial broilers.

2/ Production is the number (or pounds) available for utilization during year, i.e., sales plus home consumption, plus or minus change in inventory.

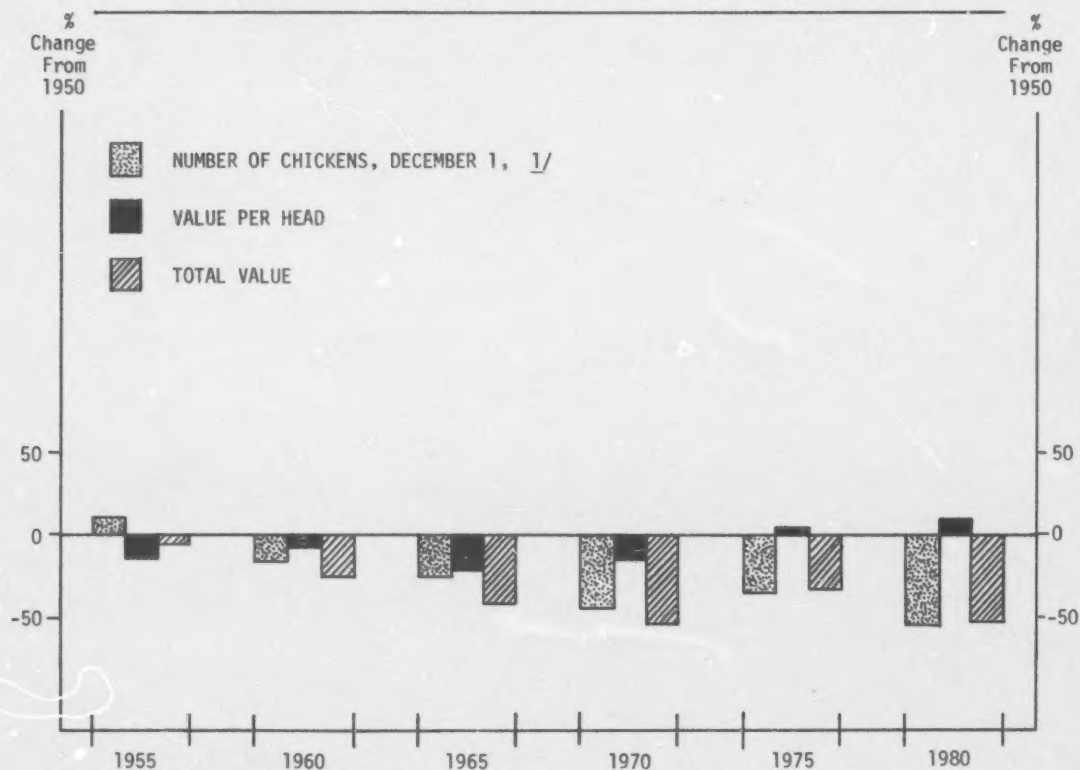
3/ Consumed in farm households on farms where produced.

CHICKENS: NUMBER, VALUE, AND CLASSES OF CHICKENS ON FARMS, DECEMBER 1, VERMONT, 1950-1980 ^{1/}

YEAR	ALL CHICKENS	VALUE		HENS AND PULLETS OF LAYING AGE		OTHER CHICKENS
		PER HEAD	TOTAL	HENS	PULLETS	
	1,000 Head	Dollars	1,000 Dollars	1,000 head	1,000 Head	1,000 Head
1950	990	2.15	2,128	239	683	68
1955	1,091	1.85	2,018	196	821	74
1960	811	1.95	1,581	285	429	97
1965	744	1.65	1,228	183	403	158
1970	514	1.85	951	101	296	117
1975	613	2.25	1,379	125	347	141
1976	624	2.40	1,498	138	337	149
1977	598	2.35	1,405	167	323	108
1978	512	2.25	1,152	132	293	87
1979	506	2.30	1,164	143	267	96
1980	435	2.35	1,022	140	202	93

^{1/} Excludes Commercial Broilers.

PERCENT CHANGE FROM 1950, NUMBER AND VALUE OF CHICKENS, VERMONT, 1955-1980

^{1/} Excludes Commercial Broilers.

NUMBER OF LAYERS AND EGG PRODUCTION BY QUARTERS AND ANNUAL, VERMONT, 1950-1980

AVERAGE NUMBER OF LAYERS (Thousand)

QUARTER / YEAR	1950	1955	1960	1965	1970	1975	1977	1978	1979	1980
December-February	980	1,017	796	611	386	524	466	478	421	397
March-May	776	897	736	594	374	501	463	450	413	383
June-August	786	908	701	591	358	484	475	438	364	416
September-November	908	1,013	733	605	380	475	485	434	365	395
Annual	863	959	742	600	375	496	472	450	391	398

RATE OF LAY PER DAY (Percent)

QUARTER / YEAR	1950	1955	1960	1965	1970	1975	1977	1978	1979	1980
December-February	57	60	61	62	63	68	68	68	70	69
March-May	60	62	62	64	64	65	68	66	70	69
June-August	57	56	60	64	61	61	66	66	69	70
September-November	50	53	58	64	61	60	68	69	69	65
Annual	56	57	60	63	62	64	68	67	70	68

TOTAL EGG PRODUCTION (Millions)

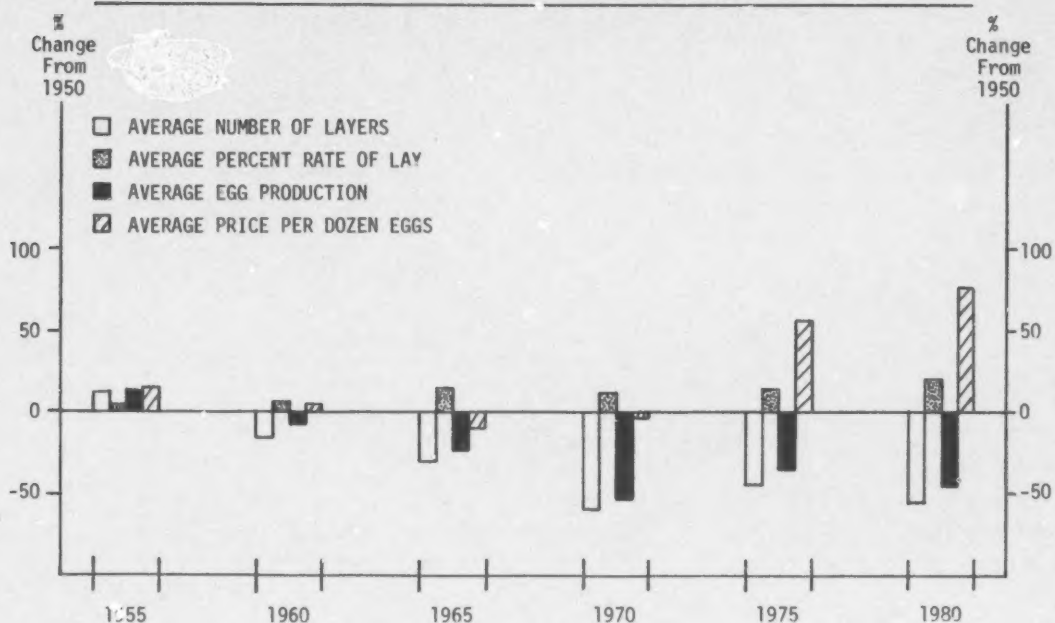
QUARTER / YEAR	1950	1955	1960	1965	1970	1975	1977	1978	1979	1980
December-February	50	53	44	34	22	32	29	29	26	25
March-May	43	51	42	35	22	30	29	27	27	25
June-August	41	47	39	35	20	27	29	27	23	27
September-November	41	49	39	35	21	26	30	27	23	23
Annual	175	200	164	139	85	115	117	110	99	100

EGGS: PRODUCTION, PRICE, CASH INCOME AND VALUE, VERMONT, 1950-1980

YEAR 1/	EGGS PRODUCED	EGGS SOLD	PRICE PER DOZEN	CASH INCOME FROM SALES	GROSS INCOME
	Millions		Cents	1,000 Dollars	
1950	173	155	48.0	6,200	6,920
1955	201	182	55.1	8,357	8,476
1960	164	155	49.5	6,394	6,765
1965	139	134	43.8	4,891	5,073
1970	85	83	47.0	3,251	3,329
1975	115	113	74.7	7,034	7,159
1976	115	114	78.1	7,420	7,485
1977	117	115	75.1	7,197	7,322
1978	110	108	75.9	6,831	6,958
1979	99	97	83.1	6,717	6,856
1980	100	98	84.6	6,909	7,050

1/ Year is the 12 month period December 1 previous year through November 30. (Except prior to 1970, which was a calendar year.)

PERCENT CHANGE FROM 1950 FOR NUMBER OF LAYERS,
EGG PRODUCTION AND PRICE, VERMONT, 1955-1980



TURKEYS: PRODUCTION, PRICE AND VALUE, VERMONT, 1950-1979 1/

YEAR	TURKEYS RAISED		NUMBER PRODUCED	POUNDS PRODUCED 1,000 POUNDS	PRICE PER POUND CENTS	VALUE OF PRODUCTION 1,000 DOLLARS
	HEAVY 1,000	LIGHT				
1950	N/A	N/A	120	2,197	38.1	837
1955	111	4	115	2,162	33.3	720
1960	28	0	28	532	31.1	165
1965	28	0	28	540	30.0	162
1970	14	1	15	287	35.0	100
1975	7	0	7	154	61.0	94
1976	7	0	7	147	61.0	90
1977	6	2	8	154	57.0	88
1978	11	2	13	260	66.0	172
1979	11	0	11	220	65.0	143

1/ Discontinued in 1980.

CROP HIGHLIGHTS

HAY

The 1980 Vermont hay acreage totaled 455,000 a 10,000 acre increase over the previous three years and a reverse of the long time trend of declining hay acreage in Vermont. Yield in 1980 was 1.95 tons per acre, slightly above the 1979 yield of 1.90 tons. In 1950, Vermont farmers harvested 901,000 acres of hay with an average yield of 1.33 tons per acre.

Plenty of moisture and warm temperatures in the spring produced an abundant first cutting, but the second cutting was short because of a lack of timely rainfall. Hay was of good quality.

Alfalfa and alfalfa mixtures also illustrate changes over time. The 110,000 acres of alfalfa hay cut during 1980 is considerably more than the 47,000 acres cut in 1950. The 1980 alfalfa yield of 2.25 tons is well above the 1950 yield of 1.80 tons.

Hay prices illustrate the change in dollar values. Price per ton for all hay was \$63.00 in both 1979 and 1980, nearly double the 1950 price of \$31.80.

CORN SILAGE

Corn silage production totaled 1,488,000 tons in 1980, a one percent increase from 1979. Acres harvested for silage was 93,000 with an average yield of 16.0 tons. In 1950, yield averaged 10.0 tons per acre on 62,000 acres. The 1980 crop was planted earlier than normal and grew well except for areas where drought stressed the plants. Quality of the crop was good to excellent.

POTATOES

Potato production has declined nearly every year during the 1950 - 1980 period because of a rapid decline in acreage. Production in 1980 totaled 120,000 hundredweight compared with 147,000 in 1979 and 756,000 in 1950. Yields increased during the period from 140 hundredweight per acre in 1950 to 200 in 1980. The 1980 crop had a value of \$1.2 million, less than the 1950 crop's value of \$1.7 million, even though the price more than quadrupled during the period from \$2.20 per cwt. in 1950 to \$9.60 in 1980.

APPLES

Commercial apple production in 1980 was 1.19 million 42-pound units, up 2 percent from 1979, compared with 972,000 units in 1950. The trend in production during the last 30 years has been nearly level, although there have been large year-to-year variations. In 1980 there was some early fruit drop but quality was good. Value of production, \$7.7 million in 1980, was 29 percent higher than the value of the 1979 crop and more than four times the value of the 1950 crop, most of the increase being a result of higher price.

McIntosh has remained the leading variety with three-fourths of the 1980 total production, a position of importance that has changed little since 1950. Red Delicious is next in importance with 11 percent of total 1980 production, up slightly from 9 percent in 1950. Cortland is third in popularity with 4 percent of the 1980 production.

ALFALFA HAY: ACREAGE, YIELD AND PRODUCTION: VERMONT, 1950-1980

CROP YEAR	ACRES HARVESTED	YIELD	PRODUCTION
	1,000	Tons Per Acre	1,000 Tons
1950	47	1.80	85
1955	85	1.90	162
1960	109	2.10	229
1965	138	1.70	235
1970	120	2.25	270
1975	96	1.85	178
1976	96	2.25	216
1977	100	1.90	190
1978	100	2.55	255
1979	105	2.55	268
1980	110	2.25	248

ALL OTHER HAY: ACREAGE, YIELD AND PRODUCTION: VERMONT, 1950-1980

CROP YEAR	ACRES HARVESTED	YIELD	PRODUCTION
	1,000	Tons Per Acre	1,000 Tons
1950	854	1.30	1,110
1955	703	1.47	1,036
1960	618	1.53	948
1965	477	1.35	643
1970	353	1.80	635
1975	356	1.55	552
1976	355	1.80	639
1977	345	1.55	535
1978	345	1.85	638
1979	340	1.70	578
1980	345	1.85	638

ALL HAY: ACREAGE, YIELD, PRODUCTION, PRICE AND VALUE, VERMONT, 1950-1980

YEAR	ACRES HARVESTED	YIELD	PRODUCTION	PRICE	VALUE OF PRODUCTION
	1,000	Tons Per Acre	1,000 Tons	Dollars Per Ton	\$1,000
1950	901	1.33	1,195	31.80	38,001
1955	788	1.52	1,198	24.10	28,872
1960	727	1.62	1,177	27.30	32,132
1965	615	1.43	878	38.10	33,452
1970	473	1.91	905	36.00	32,580
1975	452	1.62	730	77.00	60,214
1976	451	1.90	855	63.50	54,610
1977	445	1.63	725	64.00	46,144
1978	445	2.01	893	65.00	58,045
1979	445	1.90	846	63.00	53,298
1980	455	1.95	886	63.00	55,818

CORN FOR SILAGE: ACREAGE, PRODUCTION AND VALUE, VERMONT, 1950-1980

YEAR	ACREAGE		YIELD PER ACRE	PRODUCTION	VALUE OF PRODUCTION
	PLANTED 1/	HARVESTED			
	1,000 Acres		Tons	1,000	\$1,000
1950	67	62	10.0	620	2/
1955	61	58	10.5	609	2/
1960	48	47	10.5	494	2/
1965	52	51	11.5	586	2/
1970	75	75	15.5	1,163	14,421
1975	94	94	13.5	1,269	31,725
1976	93	93	15.5	1,442	25,451
1977	96	96	12.5	1,200	28,020
1978	100	100	14.0	1,400	28,700
1979	98	98	15.0	1,470	34,545
1980	93	93	16.0	1,488	34,224

1/ Acreage planted for all purposes.

2/ Data not available.

POTATOES: ACREAGE, YIELD, PRODUCTION, PRICE AND VALUE, VERMONT, 1950-1980

CROP YEAR	ACREAGE HARVESTED	YIELD	TOTAL PRODUCTION	SEASON AVERAGE PRICE	VALUE OF PRODUCTION
	Acres	Cwt. Per Acre	1,000 Cwt.	Dollars Per Cwt.	1,000 Dollars
1950	5,400	140	756	2.20	1,663
1955	3,400	150	510	2.56	1,306
1960	2,400	175	420	2.49	1,046
1965	1,800	185	333	3.10	1,032
1970	1,200	200	240	2.80	672
1975	1,000	235	235	6.50	1,528
1976	1,100	205	226	6.20	1,401
1977	1,000	235	235	5.80	1,363
1978	800	200	160	6.80	1,088
1979	700	210	147	6.10	897
1980	600	200	120	9.60	1,152

APPLES: PRODUCTION, PRICE AND VALUE: VERMONT, 1950-1980

YEAR	PRODUCTION ^{1/}			PRICE	VALUE OF UTILIZED PRODUCTION
	TOTAL	NOT UTILIZED ^{2/}	HAVING VALUE		
		1,000 42-Pound Units		Dollars Per 42-Pound Units	1,000 Dollars
1950	972	19	953	1.75	1,668
1955	1,180	107	1,073	1.90	2,039
1960	981	-	981	2.83	2,781
1965	952	73	879	2.71	2,380
1970	952	47	905	2.63	2,379
1975	1,119	-	1,119	4.33	4,326
1976	1,119	-	1,119	5.04	5,640
1977	1,119	-	1,119	5.25	5,500
1978	1,167	-	1,167	5.38	6,272
1979	1,167	-	1,167	5.08	5,929
1980	1,190	-	1,190	6.43	7,700

^{1/} Estimates relate to production in orchards of 100 or more trees.

^{2/} Abandoned because of economic reasons.

APPLES: PRODUCTION BY VARIETY: VERMONT, 1975-1980

YEAR	CORTLAND	DELICIOUS	GOLDEN DELICIOUS	MCINTOSH	NORTHERN SPY	OTHER VARIETIES	TOTAL PRODUCTION
	1,000 42-Pound Units						
1975	50	98	14	883	43	31	1,119
1976	48	124	17	843	50	37	1,119
1977	50	110	10	857	52	40	1,119
1978	48	126	12	881	45	55	1,167
1979	48	121	14	881	48	55	1,167
1980	48	131	12	893	48	58	1,190

MAPLE SYRUP

Vermont remained the leading producer of maple syrup in 1980 with only 315,000 gallons produced, two-thirds the amount produced in 1979. Several reporters said it was the worst sugaring year they had ever seen. The lack of good sap runs was attributed to the light snow cover during the winter. The weather during the sugaring season remained too warm for good sap runs. At an average price of \$16.40 per gallon, the 1980 crop had a value of \$5.2 million, compared with a \$6.6 million for the 1979 crop valued at \$14.20 per gallon.

For comparison, production in 1950 totaled 867,000 gallons. But at \$3.85 per gallon, less than one-fourth the 1980 price, the value of the crop was only \$3.3 million, or about 65 percent of the 1980 value.

MAPLE SYRUP: PRODUCTION, PRICE AND VALUE, VERMONT, 1950-1980

YEAR	PRODUCTION	PRICE PER GALLON	VALUE OF PRODUCTION
	1,000 Gallons	Dollars	1,000 Dollars
1950	867	3.85	3,338
1955	609	4.75	2,893
1960	465	4.80	2,232
1965	375	4.90	1,838
1970	305	7.50	2,288
1975	353	10.50	3,707
1976	334	11.00	3,674
1977	437	12.20	5,331
1978	410	13.00	5,330
1979	465	14.20	6,603
1980	315	16.40	5,166

MAPLE SYRUP PRICES: BY TYPE OF SALE AND SIZE OF CONTAINER, VERMONT, 1972-1980

YEAR	RETAIL					WHOLESALE					ALL SALES EQUIVALENT PER GALLON
	GAL	½ GAL	QUART	PINT	½ PINT	GAL	½ GAL	QUART	PINT	½ PINT	
Dollars											
1972	9.50	5.35	3.25	2.15	1.45	8.40	4.80	2.90	1.80	1.20	10.00
1973	9.50	5.40	3.25	2.15	1.50	8.80	5.00	3.00	1.90	1.25	9.30
1974	10.80	6.00	3.55	2.40	1.55	9.10	5.15	3.00	1.90	1.15	9.60
1975	11.20	6.30	3.85	2.50	1.65	9.75	5.40	3.30	2.10	1.35	10.50
1976	11.20	6.40	3.85	2.50	1.50	10.20	5.90	3.50	2.20	1.30	11.00
1977	12.00	6.90	4.15	2.75	1.85	11.55	6.40	3.75	2.35	1.60	12.20
1978	12.93	7.27	4.35	2.89	1.88	11.44	6.62	3.89	2.49	1.54	13.00
1979	14.26	8.08	4.86	3.21	2.07	13.10	7.47	4.35	2.77	1.74	14.20
1980	16.64	9.28	5.49	3.56	2.39	15.50	8.89	5.09	3.15	2.12	16.40

FARMS: NUMBER AND LAND, VERMONT AND NEW ENGLAND, 1970-1981 1/

YEAR	VERMONT			NEW ENGLAND		
	NUMBER OF FARMS	AVERAGE SIZE	LAND IN FARMS	NUMBER OF FARMS	AVERAGE SIZE	LAND IN FARMS
	Number	Acres	1,000 Acres	Number	Acres	1,000 Acres
1970				31,020	194	6,006
1975	6,300	281	1,770	26,120	197	5,135
1976	6,900	257	1,770	27,960	185	5,165
1977	6,700	261	1,750	28,300	182	5,155
1978	7,000	250	1,750	28,700	180	5,165
1979	7,300	238	1,740	29,900	172	5,145
1980	7,700	226	1,740	30,360	169	5,145
1981 2/	7,900	220	1,740	30,560	168	5,145

1/ A farm is a place that sells or normally would sell \$1,000 of agricultural products.

2/ Preliminary.

COMMERCIAL FERTILIZER: CONSUMPTION BY KIND AND PLANT NUTRIENTS, VERMONT, 1965-1980

YEAR ENDED JUNE 30	KIND OF FERTILIZER				PRIMARY NUTRIENTS		
	MIXED FERTILIZER	PRIMARY NUTRIENT MATERIAL	SECONDARY & MICRO-NUTRIENTS	TOTAL FERTILIZER	N	AVAILABLE P ₂ O ₅	K ₂ O
	Tons						
1965	47,946	12,173	18	60,137	4,458	8,724	8,287
1970	43,519	10,172	51	53,742	6,100	7,246	7,625
1975	41,033	10,096	38	51,167	7,002	5,862	6,737
1976	45,143	10,980	72	56,195	7,650	6,542	7,904
1977	44,771	12,788	57	57,616	7,403	8,556	7,335
1978	36,344	9,644	55	46,043	6,180	5,517	6,469
1979	41,882	10,910	0	52,792	7,273	6,813	7,729
1980	39,289	17,123	9	56,421	8,707	6,138	7,818

COMMERCIAL FERTILIZER: CONSUMPTION OF PRINCIPAL GRADES, VERMONT, 1975-1980

ANALYSIS	FOR YEAR ENDING JUNE 30											
	1975		1976		1977		1978		1979		1980	
	RANK	TONS	RANK	TONS	RANK	TONS	RANK	TONS	RANK	TONS	RANK	TONS
18-46-0	9	1,312	9	1,515	12	1,244	6	1,666	5	2,175	12	911
15-15-15	2	4,770	2	5,161	2	5,482	2	5,175	2	5,593	2	5,273
15-10-10	4	2,544	4	2,297	6	1,849	5	1,675	9	1,488	1/	--
15-8-12	1	7,125	1	8,651	1	6,616	1	6,124	1	6,961	1	6,972
10-20-20	12	988	10	1,416	9	1,441	1/	--	10	1,244	8	1,248
10-20-10	5	2,447	5	2,223	4	2,643	3	2,722	4	2,767	3	2,708
10-10-10	3	3,423	3	3,484	3	2,926	4	2,513	3	2,769	4	2,604
8-16-16	10	1,216	11	1,304	13	963	13	825	12	1,087	11	1,030
8-12-12	8	1,587	8	1,659	8	1,540	9	1,412	7	1,545	6	1,545
5-20-20	7	1,994	6	2,175	5	2,190	7	1,614	6	1,826	5	1,752
5-10-10	6	2,243	7	1,941	7	1,631	8	1,576	8	1,537	7	1,296

1/ Ranks higher than 15.

PRICES PAID FOR FEED, VERMONT, 1977-1980

KIND AND YEAR		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Dollars Per Ton													
Laying Feed	1977	153	156	157	159	160	158	150	135	130	130	135	140
	1978	143	143	145	150	150	153	150	145	140	142	144	144
	1979	144	145	149	150	152	153	165	162	160	165	160	162
	1980	162	162	170	170	170	170	170	180	190	190	200	195
Dairy Feed - 16% Protein	1977	154	158	150	150	155	150	142	133	125	126	129	139
	1978	140	135	135	135	134	138	136	132	134	140	146	150
	1979	152	154	155	151	151	153	165	157	159	167	167	170
	1980	170	165	170	170	171	170	169	180	190	190	200	200
Dairy Feed - 18% Protein	1977 1/												
	1978	146	141	141	141	140	144	140	136	138	144	150	155
	1979	157	159	160	156	156	158	172	164	166	174	174	180
	1980	180	175	180	178	180	180	175	185	200	200	210	210
Dairy Feed - 20% Protein	1977 1/												
	1978	155	150	150	150	149	152	144	139	141	147	154	158
	1979	160	162	163	159	159	161	175	167	169	176	176	182
	1980	182	180	185	185	183	185	180	195	210	210	230	230
Dollars Per Cwt.													
Bran	1977	9.00	9.20	9.00	9.00	9.20	9.10	9.00	8.40	7.60	7.70	7.80	8.20
	1978	8.30	8.00	8.00	8.00	7.90	8.10	8.10	8.00	8.30	8.30	8.50	8.50
	1979	8.60	8.80	8.90	8.90	8.80	8.90	9.50	9.00	8.90	8.90	8.90	9.20
	1980	9.80	9.90	10.00	9.90	10.50	10.50	9.60	9.90	10.50	10.50	10.50	10.50
Middlings	1977	8.50	8.80	8.40	8.40	8.60	8.30	8.30	8.00	7.20	7.10	7.30	7.90
	1978	7.70	7.50	7.60	7.60	7.50	7.80	7.70	7.40	7.50	7.70	8.30	8.40
	1979	8.50	8.60	8.70	8.30	8.30	8.30	9.20	8.60	8.60	8.90	9.00	9.20
	1980	9.20	8.70	9.00	9.30	9.50	9.40	9.10	9.60	10.50	10.50	10.50	10.50
Cornmeal	1977	7.90	7.90	7.90	7.80	7.80	7.70	7.40	7.00	6.70	6.60	6.90	7.30
	1978	7.40	7.40	7.50	7.80	7.90	8.20	8.00	7.80	7.70	7.70	7.80	7.80
	1979	7.80	7.90	8.20	8.30	8.50	8.60	9.40	9.30	9.30	9.30	9.20	9.10
	1980	8.80	8.70	9.00	9.00	9.30	9.10	9.30	10.00	10.50	10.50	10.50	10.50
Soybean Meal	1977	14.00	15.00	15.50	16.50	17.50	16.50	14.50	13.50	12.50	12.00	12.50	13.00
	1978	13.50	13.00	13.50	14.00	14.00	14.00	14.00	13.50	13.50	13.50	14.00	14.00
	1979	14.50	14.50	15.00	15.00	15.00	15.00	16.00	15.00	14.50	15.00	14.50	15.00
	1980	15.00	14.50	14.50	14.00	14.00	14.00	14.00	15.00	17.00	18.00	18.00	17.50
Molasses	1977	5.30	5.40	5.20	5.10	5.10	5.00	5.00	5.00	5.00	5.10	5.10	5.10
	1978	5.10	5.10	5.10	5.10	5.10	5.10	5.20	5.10	5.20	5.40	5.60	5.80
	1979	5.80	5.90	6.00	6.00	6.00	6.10	6.40	6.40	6.40	6.60	7.20	7.00
	1980	7.20	8.00	8.00	7.90	8.00	8.00	8.00	8.80	9.70	9.70	10.00	9.50
Stock Salt	1977	4.80	4.80	4.90	4.80	4.80	4.80	4.80	4.90	4.90	4.90	4.90	5.00
	1978	4.90	4.90	4.90	4.90	4.90	4.90	4.80	4.80	5.10	5.30	5.30	5.50
	1979	5.60	5.60	5.70	5.70	5.70	5.60	5.70	5.80	5.80	5.80	6.00	6.00
	1980	6.10	6.00	6.50	7.00	7.50	7.50	7.10	6.90	7.50	7.60	7.50	7.50

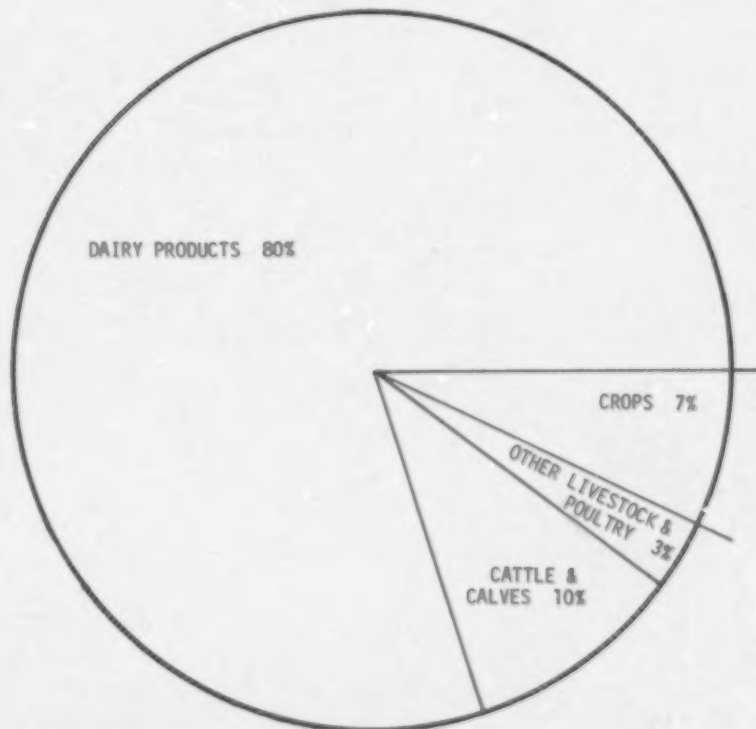
1/ Not Available.

CASH RECEIPTS FROM FARM MARKETINGS, VERMONT, 1978-1980

COMMODITY	1978	1979	1980
Thousand Dollars			
HAY	2,990	3,339	3,846
POTATOES	1,041	1,067	833
MISCELLANEOUS VEGETABLES	1,489	1,740	1,899
APPLES	5,703	5,924	6,528
BERRIES	358	578	405
MISCELLANEOUS FRUITS	40	13	13
MAPLE PRODUCTS	5,005	6,319	4,897
FOREST PRODUCTS	4,026	4,429	4,429
GREENHOUSE & NURSERY	2,010	2,219	2,219
MISCELLANEOUS CROPS	523	523	523
TOTAL CROPS	23,185	26,091	25,592
CATTLE & CALVES	44,030	53,073	39,053
HOGS	1,297	1,225	3,328
SHEEP & LAMBS	226	281	202
DAIRY PRODUCTS	234,843	267,068	302,016
CHICKENS	212	155	101
EGGS	7,461	7,549	6,909
MISCELLANEOUS POULTRY	182	192	190
MISCELLANEOUS LIVESTOCK	916	619	914
TOTAL LIVESTOCK	289,167	330,162	352,713
TOTAL ALL COMMODITIES	312,352	356,253	378,305

VERMONT CASH RECEIPTS - 1980

LIVESTOCK 93%



CROPS 7%

VERMONT: CASH RECEIPTS FROM FARM MARKETING AND GOVERNMENT PAYMENTS, 1950-1979

YEAR	CASH INCOME FROM FARM MARKETING			GOVERNMENT PAYMENTS	TOTAL MARKETINGS & GOVERNMENT PAYMENTS
	Crops	Livestock & Livestock Products	Total Crops and Livestock		
(000) Dollars					
1950	12,203	91,858	104,061	1,301	105,362
1955	13,325	97,175	110,500	1,029	111,529
1960	14,522	111,641	126,163	1,579	127,742
1965	14,430	116,507	130,937	1,606	132,543
1970	10,931	146,584	157,515	1,380	158,895
1975	17,576	208,615	226,191	1,257	227,448
1976	19,759	242,908	262,667	1,187	263,854
1977	21,913	244,106	266,019	2,026	268,045
1978	21,999	282,041	304,040	4,538	308,578
1979	23,129	319,381	342,510	1,215	343,725

VERMONT: REALIZED GROSS AND NET INCOME FROM FARMING, 1950-1979

ITEM	1950	1955	1960	1965	1970	1975	1977	1978	1979
Million Dollars									
Cash Receipts From Farm Marketing	104.1	110.5	126.2	130.9	157.5	226.2	266.0	304.0	342.5
Government Payments	1.3	1.0	1.6	1.6	1.4	1.3	2.0	4.5	1.2
Non-Money Income	17.5	16.8	15.4	11.9	14.7	26.7	31.2	34.7	39.1
Other Farm Income	.1	.3	.4	.9	.9	1.7	2.2	2.4	2.9
Gross Farm Income	122.9	128.6	143.5	145.4	174.6	255.9	301.5	345.7	385.7
Farm Production Expenses	91.4	94.8	101.1	101.2	127.1	204.8	243.0	251.1	285.6
Realized Net Farm Income	31.5	33.9	42.5	44.2	47.5	51.1	58.4	94.6	100.1
Net Change Farm Inventories	-1.4	--	2.5	-8.0	2.1	-.4	-5.1	3.5	12.1
Total Net Farm Income	30.1	33.8	45.0	36.2	49.6	50.7	53.3	98.1	112.3
Estimated Number Farms (000)	22.1	16.3	13.2	9.7	7.3	6.3	6.7	7.0	7.3
Average Net Farm Income (dollars)	1,362	2,074	3,409	3,732	6,795	8,048	7,955	14,014	15,384

VERMONT: FARM PRODUCTION EXPENSES, 1975-1979

Current Farm Operating Expenses	1975	1976	1977	1978	1979
Million Dollars					
Feed	69.3	84.0	82.5	78.3	90.3
Livestock	1.8	3.3	5.5	3.9	3.1
Seed	1.6	1.9	4.7	4.4	4.6
Fertilizer and Lime	9.1	7.6	7.9	6.8	8.0
Repairs and Operation of Capital Items	21.0	24.1	27.2	31.2	37.1
Hired Labor	15.4	16.9	19.1	19.6	22.4
Miscellaneous	29.1	32.0	34.5	38.8	45.4
Total Current Farm Operating Expenses	147.2	169.8	181.3	183.0	210.9
Depreciation	39.0	42.8	40.0	45.0	48.9
Taxes on Farm Property	10.3	11.1	12.1	13.2	14.1
Interest on Farm Mortgage Debt	9.8	10.8	11.0	11.3	13.2
Net Rent to Non-Farm Landlords	-1.6	-1.4	-1.3	-1.3	-1.5
Total Production Expenses	204.8	233.0	243.0	251.1	285.6

FARM PRODUCTION EXPENDITURES, NORTHEAST AND UNITED STATES, 1979

EXPENDITURE 2/	NORTHEAST 1/		UNITED STATES	
	AVERAGE PER FARM 3/	TOTAL EXPENDITURE 4/	AVERAGE PER FARM	TOTAL EXPENDITURE
	DOLLARS	1,000 DOLLARS		
TOTAL FARM PRODUCTION EXPENDITURES	46,586	14,869,712	58,037	135,138,927
<u>LIVESTOCK & POULTRY & OTHER RELATED EXPENSES:</u>	3,280	1,046,832	9,216	21,459,670
CATTLE PURCHASED	2,028	647,315	7,622	17,747,987
HOGS & PIGS PURCHASED	360	114,869	648	1,509,451
SHEEP & LAMBS PURCHASED	17	5,482	340	791,732
POULTRY PURCHASED	557	177,629	356	928,093
OTHER LIVESTOCK & POULTRY PURCHASED	218	69,740	196	456,785
OTHER RELATED EXPENSES 5/	100	31,799	54	125,623
<u>FARM SERVICES:</u>	4,870	1,554,519	8,340	19,419,858
CUSTOM HIRE	426	136,100	894	2,080,931
VETERINARIAN, MEDICINE, & SERVICES	471	150,244	403	937,923
HIRED TRANSPORTATION FOR DELIVERY TO FARM	13	5,769	60	138,819
INSURANCE	693	221,294	815	1,897,017
MARKETING EXPENSES (CROP & LIVESTOCK)	804	256,787	1,059	2,465,315
MISCELLANEOUS FARM BUSINESS	550	175,513	670	1,560,041
RENT	1,907	608,812	4,441	10,339,813
<u>FEED:</u>	7,795	2,488,146	7,713	17,960,386
GRAINS	1,653	527,597	2,137	4,975,525
HAYS & FORAGES	321	102,323	681	1,586,108
MIXED OR FORMULA FEEDS	5,631	1,797,361	4,568	10,635,615
OTHER FEEDS, ADDITIVES, AND INGREDIENTS	185	59,035	247	574,240
PASTURE & GRAZING LIVESTOCK	6	1,830	81	188,898
<u>WAGES & CONTRACT LABOR:</u>	4,628	1,477,146	4,000	9,353,019
CASH WAGES	3,749	1,196,522	3,120	7,265,614
CONTRACT LABOR	191	60,834	326	758,149
TOTAL PERQUISITES FURNISHED	689	219,790	568	1,329,265
<u>INTEREST:</u>	2,653	846,652	3,956	9,211,596
<u>FERTILIZER, LIME & SOIL CONDITIONERS:</u>	3,130	999,190	3,762	8,759,293
FERTILIZER	2,939	938,035	3,598	8,378,092
LIME & SOIL CONDITIONERS	192	61,155	164	381,201
<u>FUELS & ENERGY:</u>	2,914	930,136	3,524	8,205,509
GASOLINE - DELIVERED BULK TO FARM	834	266,102	935	2,176,296
GASOLINE - PURCHASED AT SERVICE STATION	183	58,393	275	639,438
DIESEL FUEL	601	191,718	1,004	2,337,396
FUEL OIL AND KEROSENE	207	65,961	52	120,057
L.P. GAS	147	46,851	237	551,478
NATURAL GAS	120	38,461	126	292,754
MOTOR OIL, GREASE, & SPECIAL FLUIDS	126	40,198	180	418,734
OTHER FUEL (COAL, WOOD, ETC.)	64	20,282	12	29,026
ELECTRICITY (EXCLUDING IRRIGATION)	629	200,822	479	1,115,129
ELECTRICITY FOR IRRIGATION	4	1,350	226	525,201

SEE FOOTNOTES, PAGE 29

FARM PRODUCTION EXPENDITURES, NORTHEAST AND UNITED STATES, 1979

EXPENDITURE 2/	NORTHEAST 1/		UNITED STATES	
	AVERAGE	TOTAL	AVERAGE	TOTAL
	PER FARM 3/ DOLLARS	EXPENDITURE 4/ 1,000 DOLLARS	PER FARM	EXPENDITURE
<u>FARM & MOTOR SUPPLIES:</u>	2,942	938,957	3,196	7,441,874
MOTOR VEHICLE OPERATING COST OTHER THAN FUELS	1,870	597,035	2,319	5,399,725
MISCELLANEOUS FARM SUPPLIES	734	234,369	656	1,526,708
MARKETING CONTAINERS	337	107,552	221	515,441
<u>BUILDING, FENCING, & FARM IMPROVEMENTS: 6/</u>	3,710	1,184,132	3,169	7,379,473
NEW BUILDING CONSTRUCTION & REMODELING	2,700	861,889	1,867	4,347,476
BUILDING MAINTENANCE & REPAIR	345	110,070	235	547,601
FENCING EXPENSES	126	40,191	194	452,576
MAINTENANCE AND REPAIRS (OTHERS)	141	44,856	266	620,504
NEW CONSTRUCTION IMPROVEMENTS (OTHERS)	387	123,588	592	1,379,596
<u>TRACTORS & SELF-PROPELLED MACHINERY:</u>	2,116	675,558	2,835	6,601,253
TRACTORS, TOTAL NET COST	1,181	376,993	1,705	3,971,181
TRACTORS, NEW NET COST	636	232,951	1,007	2,344,403
TRACTORS, USED NET COST	545	174,042	699	1,626,778
SELF-PROPELLED MACHINERY, TOTAL NET COST	852	271,851	1,071	2,494,424
LEASING OR RENTAL EXPENSES, TRACTORS	70	22,404	38	87,923
LEASING OR RENTAL EXPENSES, SELF-PROPELLED	5	1,722	12	27,488
<u>OTHER FARM MACHINERY, IMPLEMENTS, & LVSTK EQUIP.:</u>	2,321	740,829	2,321	5,404,153
OTHER FARM MACHINERY, TOTAL NET COST	1,499	478,389	1,625	3,783,606
OTHER FARM MACHINERY, UNALLOCATED	141	45,021	143	332,283
DAIRY, POULTRY, & OTHER LIVESTOCK EQUIPMENT	498	158,905	337	785,718
REPAIR & MAINTENANCE LIVESTOCK EQUIPMENT	150	48,008	138	321,348
LEASING OR RENTAL OTHER FARM MACHINERY & EQUIP.	33	10,506	78	181,197
<u>SEEDS & PLANTS: 7/</u>	2,179	695,540	1,585	3,691,753
<u>TAXES:</u>	1,647	525,640	1,559	3,629,832
<u>AUTOS, TRUCKS, & OTHER VEHICLES: 8/</u>	1,021	326,007	1,364	3,177,031
AUTOS, TOTAL NET COST	165	52,791	207	482,661
TRUCKS, TOTAL NET COST	710	226,690	957	2,228,003
TRUCKS, NEW NET COST	450	143,727	632	1,471,181
TRUCKS, USED NET COST	260	82,963	325	756,822
<u>AGRICULTURAL CHEMICALS: 9/</u>	1,077	343,633	1,313	3,057,349
PESTICIDES FOR CROPS & CROP STORAGE	999	318,851	1,160	2,704,931
PESTICIDES FOR LIVESTOCK, POULTRY, & BLDGS.	31	9,916	57	132,369
SEED TREATMENTS	8	2,642	20	46,331
<u>UNALLOCATED OTHER EXPENSES:</u>	303	96,793	132	306,493

1/ Includes thirteen states: Connecticut, Delaware, Maine, Maryland, Massachusetts, Michigan, New Hampshire, New Jersey, New York, Ohio, Pennsylvania, Rhode Island, and Vermont

2/ Farm share, including landlord expenditures

3/ Total expenditures divided by number of farms

4/ Totals may not add due to rounding

5/ Excludes veterinarian fees, medicine, and breeding fees

6/ "All other improvements" included in totals only

7/ Excludes seed treatment

8/ Vehicles other than autos and trucks included in totals only

9/ Landlord expenditure included in totals only

UNITED STATES: CIVILIAN PER CAPITA CONSUMPTION OF MAJOR FOOD COMMODITIES, 1970-1979 1/

Commodity	1970	1973	1974	1975	1976	1977	1978 2/	1979 2/
	Pounds							
Meats:	151.4	142.6	152.5	145.4	155.3	154.6	149.7	147.7
Beef	84.1	81.1	86.4	88.9	95.7	93.2	88.9	79.6
Veal	2.4	1.5	1.9	3.5	3.3	3.2	2.5	1.7
Lamb and mutton	2.9	2.4	2.0	1.8	1.7	1.5	1.4	1.4
Pork	62.0	57.6	62.2	51.2	54.6	56.7	56.9	65.0
Fish (edible weight)	11.8	12.9	12.2	12.3	13.0	12.8	13.4	13.7
Poultry Products:								
Eggs	39.5	37.3	36.6	35.4	34.8	34.5	35.2	35.7
Chicken (ready-to-cook)	40.5	40.7	41.1	40.6	43.3	44.9	47.7	51.8
Turkey (ready-to-cook)	8.0	8.5	8.9	8.6	9.2	9.2	9.4	10.2
Dairy Products:								
Cheese	11.5	13.7	14.6	14.5	15.8	16.4	17.3	18.1
Condensed and evaporated milk	7.1	6.0	5.6	5.0	5.0	4.5	4.2	4.4
Fluid milk and cream (product weight)	296.0	293.0	288.0	291.1	292.0	288.4	285.9	284.2
Ice cream (product weight)	17.7	17.5	17.5	18.7	18.1	17.7	17.8	17.7
Fats and Oils--Total Fat Content	53.0	54.3	53.2	53.4	56.1	54.4	55.6	57.6
Butter (actual weight)	5.3	4.8	4.6	4.8	4.4	4.4	4.5	4.5
Margarine (actual weight)	11.0	11.3	11.3	11.2	12.2	11.6	11.4	11.6
Lard	4.7	3.4	3.2	3.0	2.7	2.3	2.2	2.3
Shortening	17.3	17.3	17.0	17.3	18.1	17.6	18.2	19.2
Other edible fats and oils	18.2	20.8	20.3	20.3	22.0	21.6	22.6	23.4
Fruits:								
Fresh	79.3	74.2	76.9	81.3	83.7	79.6	81.6	80.5
Citrus	28.1	26.9	27.1	28.7	28.5	25.2	26.3	24.3
Noncitrus	51.2	47.3	49.8	52.6	55.2	54.4	55.3	56.2
Processed:								
Canned fruit	23.3	21.3	19.6	19.3	19.2	20.0	19.0	19.2
Canned juice	14.6	15.9	14.6	16.2	16.2	15.6	17.4	17.4
Frozen (including juices)	9.8	11.2	11.2	12.6	12.2	11.8	11.3	12.3
Chilled citrus juices	4.7	5.3	5.2	5.7	6.2	5.8	6.4	6.4
Dried	2.7	2.6	2.4	3.0	2.6	2.5	2.0	2.2
Vegetables:								
Fresh 3/	91.0	93.0	95.0	94.1	94.2	91.8	93.3	97.2
Canned	53.0	57.7	56.9	55.1	55.7	56.2	54.1	55.0
Frozen (excluding potatoes)	9.7	10.7	10.2	9.7	10.2	10.3	10.8	11.1
Potatoes 4/	115.3	114.4	112.3	120.3	114.4	119.8	122.9	123.0
Sweetpotatoes 4/	5.2	4.6	4.9	5.0	4.9	4.5	5.0	5.0
Grains:								
Wheat flour 5/	110	112	110	113	118	114	115	112
Rice	6.7	7.0	7.6	7.7	7.2	7.6	5.8	9.2
Other:								
Coffee	10.4	10.1	9.5	9.0	9.4	6.7	7.9	7.8
Tea	.7	.8	.8	.8	.8	.9	.7	.7
Cocoa	3.1	3.4	3.0	2.6	3.0	2.7	2.7	2.7
Peanuts (shelled)	5.9	6.6	6.4	6.5	6.3	6.6	6.6	6.6
Dry edible beans	5.9	6.4	6.7	6.5	6.3	6.1	5.9	6.1
Melons	21.2	19.8	17.1	17.3	18.6	19.3	20.1	18.9
Sugar (refined)	101.8	101.5	96.6	90.2	94.7	95.7	93.1	91.3

1/ Quantity in pounds, retail weight unless otherwise shown. Data on calendar year basis except for dried fruits, fresh citrus fruits, peanuts, and rice which are on a crop-year basis. 2/ Preliminary. 3/ Commercial production for sale as fresh produce. 4/ Including fresh equivalent of processed. 5/ White, whole wheat, and semolina flour including use in bakery products.

VERMONT: ESTIMATED TOTAL POPULATION, July 1, 1950-1979 1/

Year	Total Population	Year	Total Population
	Thousands		Thousands
1950	378,000	1976	477,000
1960	390,000	1977	483,000
1970	446,000	1978	487,000
1975	473,000	1979 2/	493,000

1/ U.S. Department of Commerce, Bureau of the Census.

2/ Preliminary.